WakalaAID
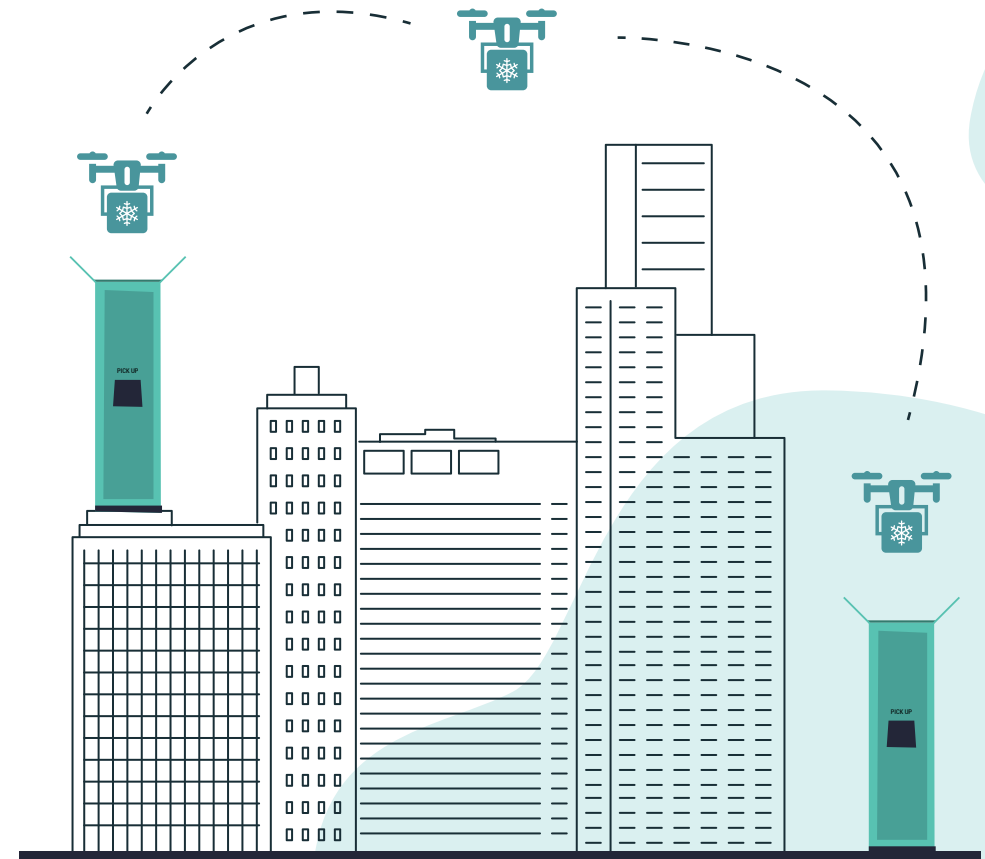
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Wakala AID

Wakala AID (Autonomous and Intelligent Drones) is a network of self-sufficient and energy-efficient drones capable of moving on any route in order to deliver medicines, medical relief material, bags of blood for transfusions, vaccines and human organs.
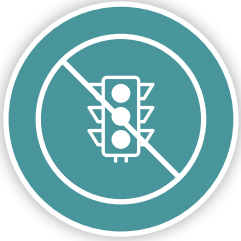
Strengths

Energy Efficiency: the drones are powered by batteries and recharged mostly with energy from renewable sources;

Speed of transport: drones always travel at maximum speed;

Zero obstacles: drones can reach anywhere.
There are no limits dictated by the presence of traffic,
traffic lights, blocked roads;

Nominally zero accident rate: air traffic is strictly regulated
to eliminate route collisions. Drones are designed to avoid
obstacles and mount bollards to avoid attacks by birds of prey;

Nominally unlimited routes according to network design.

The Drone

AID platform drones are able to travel autonomously along the set route, being able to return to the point of departure, having delivered the transported material. They are able to assess their surroundings thanks to a high-definition camera and a specially developed artificial intelligence, so as to avoid any obstacles in flight and autonomously return to the preset route.

The delivery and charging station

To enable drones to sustain journeys that cover distances beyond the nominal lifetime of their battery, a system of of charging stations to be located not only at the points of departure and arrival, but also at intermediate points.

The stations house a rack of batteries that are always charged and available to the drones. Should the drone fall below a predetermined level of charge level, it automatically recalculates its course in order to reach the nearest charging station.

The stations are powered primarily by solar energy and secondarily by the electricity grid. The charging stations also have the role of delivery as equipped with a special door that allows the object transported by the drone to be collected.

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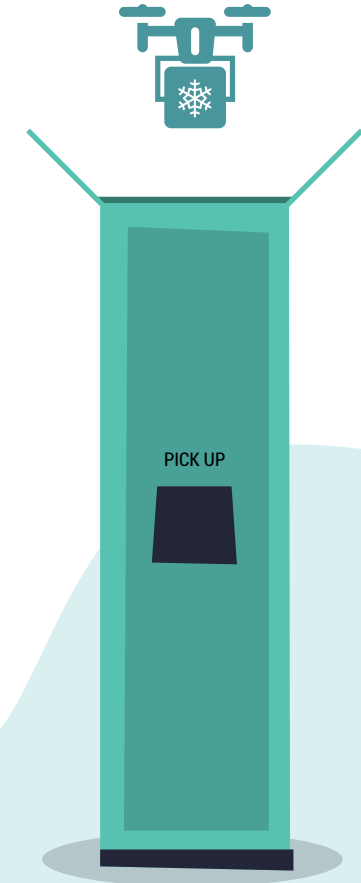
Network monitoring and control

A remote system is in continuous communication with all drones available in the field via the 4G/5G network so as to receive in near-real-time information on the status of the devices (battery charge percentage, flight autonomy hardware status), their GPS coordinates and any alerts related to the devices.

A web console simultaneously allows the drones to be visualized on a map, to follow their journeys in real time and to select a particular drone in order to check its status and, if eventually connect to its camera to view the images captured at the time. The console is also capable of executing remote commands on the drone and allow an operator to pilot it, in the event of an emergency.

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Shipment management and tracking

The recipient has the possibility of tracking the drone assigned to its shipment in near-real-time on a map via a mobile application (available for both iOS and Android devices) and/or a website.

The user receives a notification when the drone has made the delivery.

The mobile app allows the user to unlock the station door in order to collect the material delivered by the drone.

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