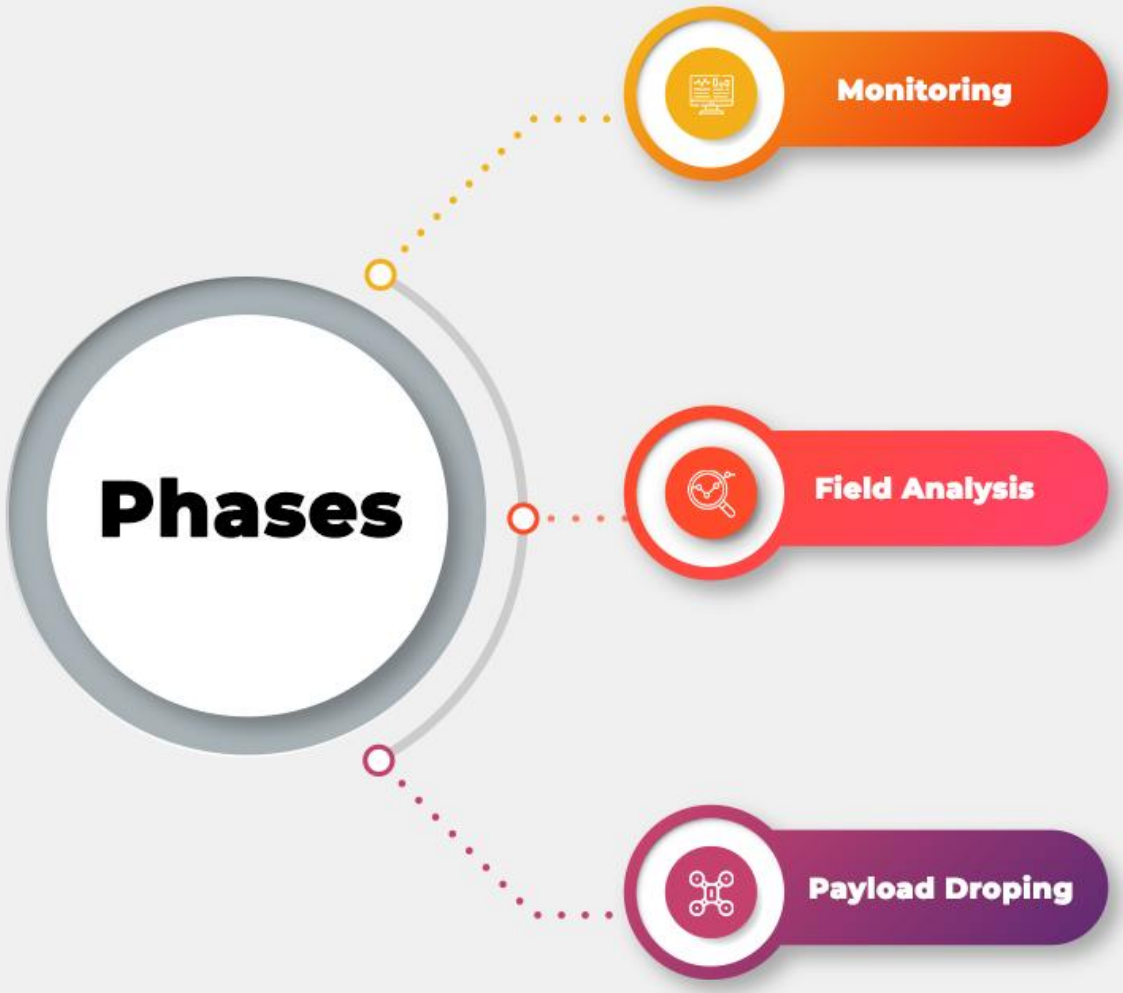
Asbestos

Team
ASBESTOS

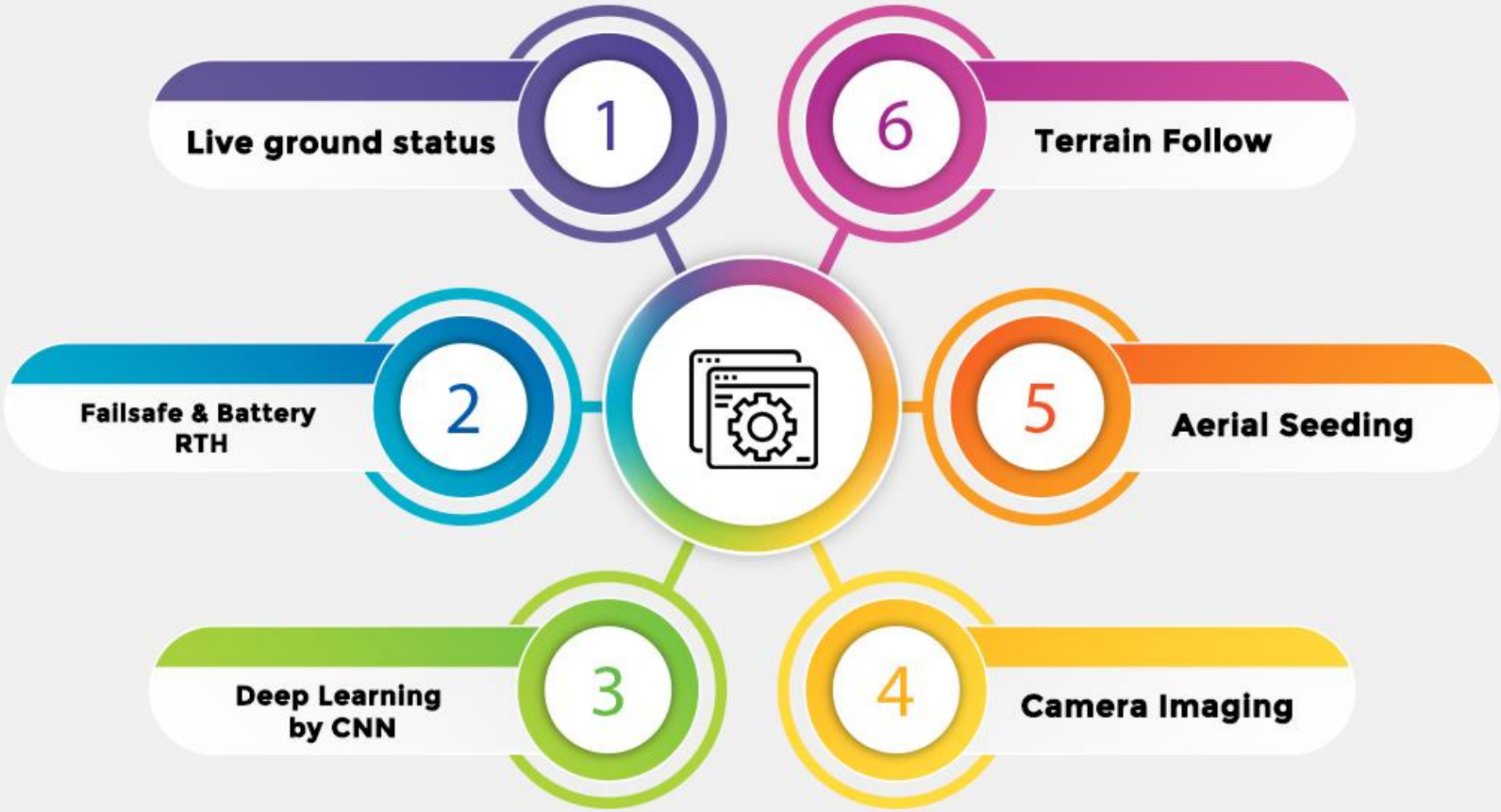
Problem Statement

CAPA4: Monitoring Soil health and condoling paste and weeds – Using computer vision and image analysis farmer can optimize pesticide usage by identifying paste affected crops and weeds.

Our Product



Our Features



Project Description

Accuracy innovation has driven the cultivating upheaval lately. Checking crops from the sky utilizing rural automatons looks set to drive the following, as agronomists, horticultural specialists and ranchers go to UAVs (or UAS) to acquire productive yield bits of knowledge and to all the more precisely design and deal with their activities.

Camera Imaging

Drone can capture images all around the terrain or farm using camera which can capture images in 360 degree and we can add the thermal camera as well as night vision camera as per our require-ments for the project.

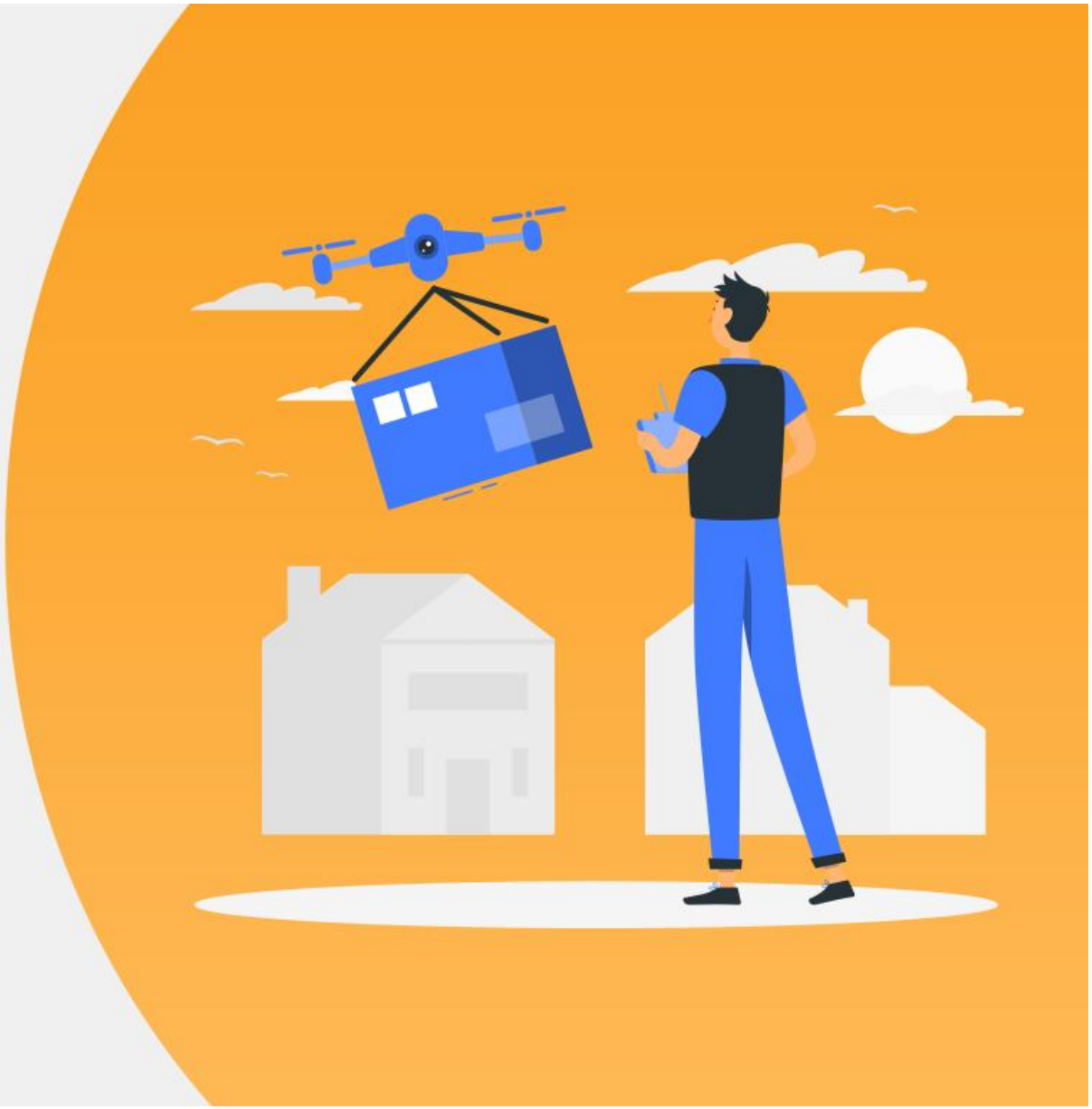
Live Ground Status

Knowing the status of what is happening on the ground can help us predict which is the next safest spot to reach out for spraying of the crops and to drive to the next route.

Payload Dropping

Agricultural drone will be using payload release mechanism with remote Control Servo Driven Payload Release using the switch in the transmitter basically It uses a sliding pin mechanism, driven by a high quality , metal-geared servo to cover and open a slot, which the hanging of a payload can be dropped or the fertilizer spraying mechanism

The quadcopter designed for precision variable rate application of liquid pesticides, fertilizers, and herbicides will be bringing new levels of efficiency and manageability to agriculture spraying



Field Analysis

Crop observing:
An expert UAV such gives a comprehensive perspective on a yield's development, empowering experts to rapidly and definitely recognize issues, and better objective their field exploring. Multi-year ramble information additionally permits the better arranging and checking of enhancements, for example, jettison and advancing manure applications.

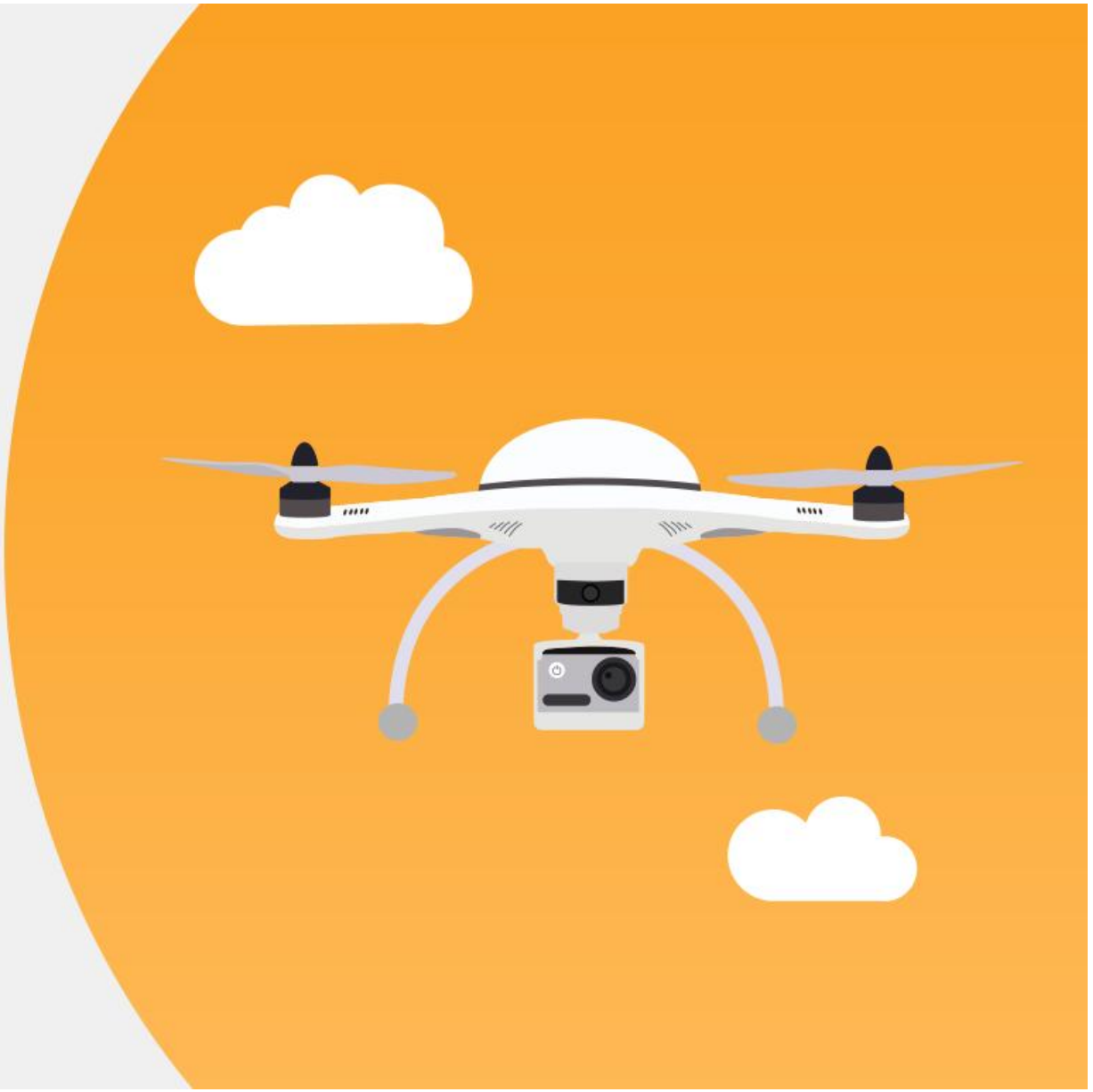
Soil checking:
Automaton information can be utilized to extricate soil attributes. These incorporate dampness, incline, height and that's just the beginning. This capacity empowers progressively precise soil inspecting and the creation of increasingly appropriate seeding solutions.

Field Monitoring

For the autonomous making of drone at the Agricultural fields using Machine learning, augumented relationship, and IOT based machine leading smart flight controller with telemetry as well as GPS will be used, and autonomous drone will be planned with the software mission planner we will create a powertool new platform in agriculture. With great applications in mission planner will load the firmware as well as way points for the take off and landing .

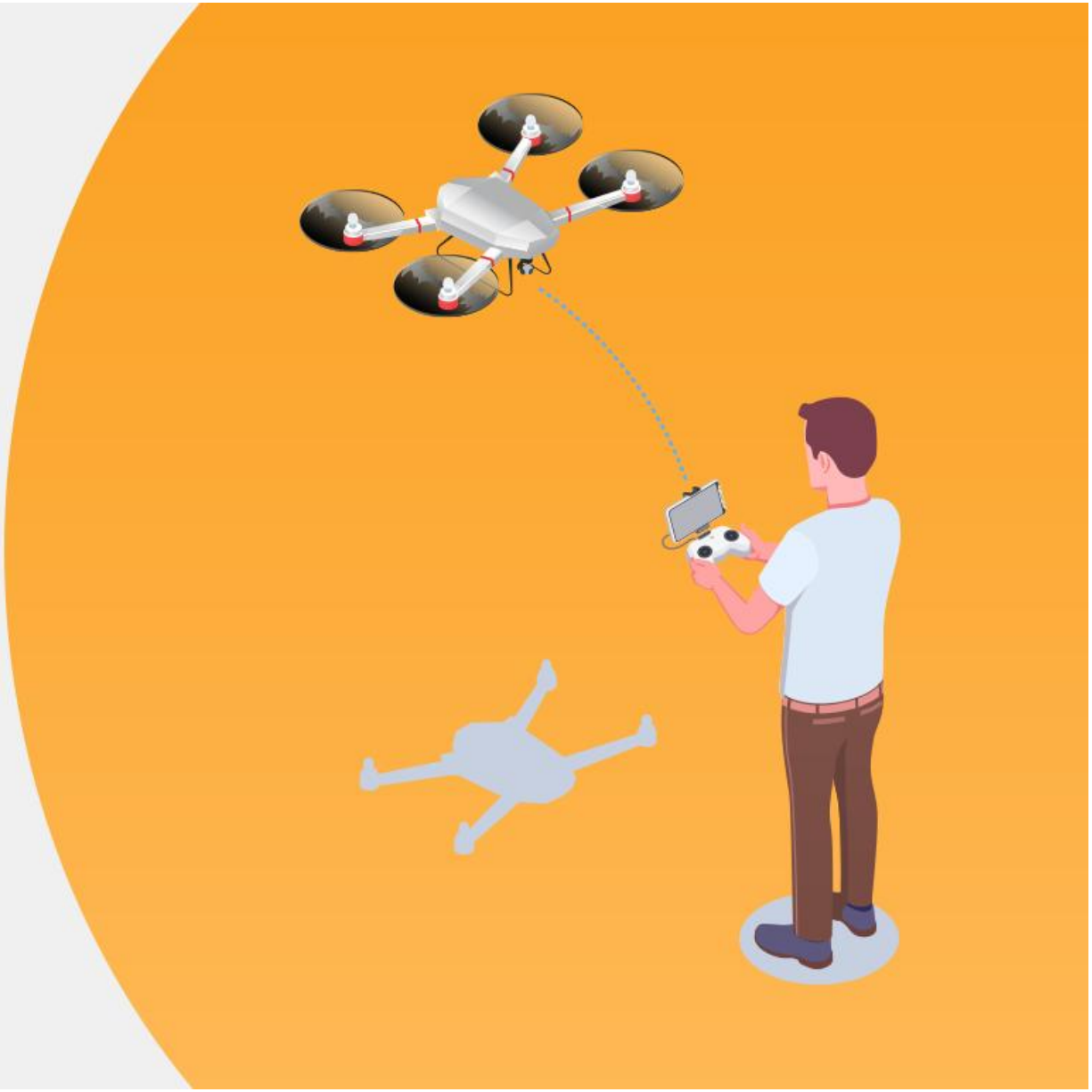
Aerial Seeding

Sowing seed from the air allows getting a cover crop up and growing even before fall crops are harvested. The main reson for using aerial seeding is the potential growth area for crop dusters for the large fields where human workforce is needed more.



Terrain Follow

By integrating a radar together with intelligent flight control system,drone can scan the terrain below it in real time to keep a constant, meter-accurate height above crops. seeding droping mechanism is maintained even the ground rises and drops so that an optimal quantity of seeds are used with the terrain follow - terrain.



Deep Learning by CNN

Dataset is prepared by scraping images from Google and model is trained using convolutional neural networks, due to lack of amount of data transfer learning is used. MobileNet is used with imagenet as dataset to load pre trained weights. Good accuracy of 80% is achieved by classifying images into fertile or infertile.

Failsafe and Battery RTH

This RTH is triggered when the Intelligent Flight Battery is depleted to the point that it may affect the return of the aircraft.When this happens, a buzzer will sound and the drone will automatically begin to ascend to the set RTH.

Business Model

There are plenty of ways such as servicing , plug and fly consumer compatible industrial drones , indivual company projects for mapping , aerial survey and other industrial purposes

Customer Acquisition by providing service , spare parts of drones and later on entering international market for the sell.