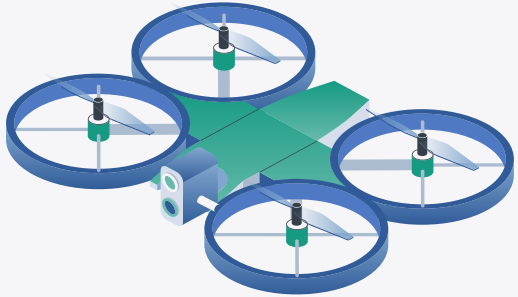

DRONE Technology

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01

Technology Overview

WHAT IS A DRONE? HOW DOES IT WORK?

- Formerly known as UAVs
  - Unmanned aerial vehicles
- Flying robot that can be remotely controlled/fly autonomously
- Usually small or medium sized
- Can carry out wide range of tasks
- Different types:
  - Multi-rotor
    - Most accessible to public
  - Single-rotor
    - Transport heavier objects

- Two basic functions: flight and navigation
- Must have power source (battery/fuel)
- Pilot uses remote control to direct its flight from the ground
  - Can set course automatically by using sensors and GPS
    - Return to home function
- Controls through radio waves
  - Such as Wi-Fi

PARTS OF A DRONE

MOTOR

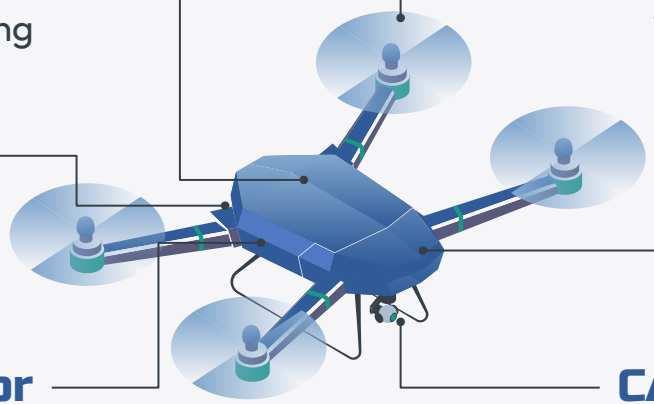
Keeps drone up and running

GPS

Connects to satellites

Sensor

Detects motion, orientation, and altitude



PROPELLER

Rotating to provide lift

- Most drones have two pairs
  - reverse/counterclockwise rotation to provide stability

RECEPTOR

Communication system between drone and controller

CAMERA

See things from the drone's perspective

02

Applications

COMMON USES FOR DRONES

Delivery

Drones can reduce delivery times and lower emissions compared to traditional delivery methods. They can also access remote areas for supply delivery.

Disaster Response

Drone cameras can be used for search & rescue. They can also be used to transport blood or vaccines to remote areas.

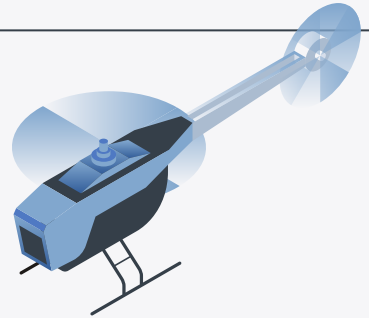
Military

Military-grade drones can be used to conduct surveillance and precision strikes in conflict zones.

Media

Drones allow for aerial photography/filmmaking, capturing footage for up to 8k. They are also used for light shows where drones have synchronized LEDs to replace fireworks for events.

DRONES IN ACTION



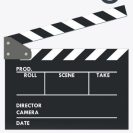
03

Market Opportunities

Market Opportunities:

Entertainment & Media

Drones can capture cinematic views for films, sports events, marketing etc.



Public Safety

Drones can be helpful in situations where there is in need of emergency response. For example, collapsed buildings or flooded areas.

Environmental Monitoring

Drones can track wildlife, like endangered species. It can also monitor disaster response or climate change research

Construction & Infrastructure

Drones can assist with site surveying, tracking progress and inspections

04

Problems and Challenges

Problem - Safety Risks

DRONES CAN CAUSE ACCIDENTS

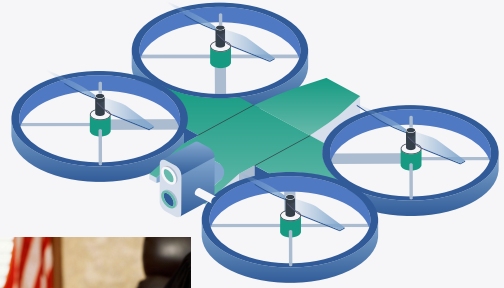
- Can crash into people, planes, or buildings
- May loose connection or controls mid-air
- Technical failures can happen anytime

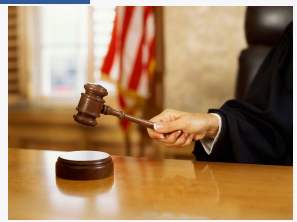
Problem – Privacy

DRONES CAN INVADE PERSONAL SPACE

- They can fly over homes and private places
- Can secretly record photos or videos
- People feel watched or uncomfortable

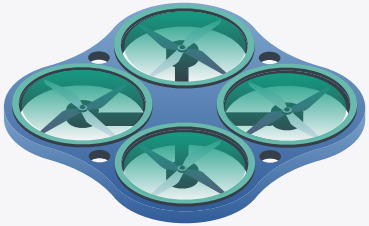
Challenge - Regulation and Laws



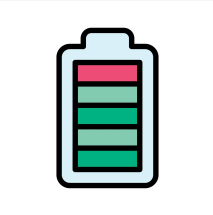


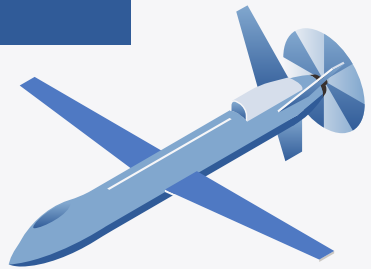
Rules are still catching up.

- Hard to track who owns or controls a drone
- Laws vary by country and city
- Not enough enforcement



Challenge – Limited Battery & Range





- Short battery life
- Can’t travel long distances
- Needs frequent recharging.

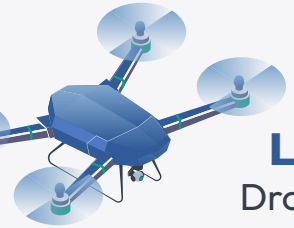
05

Future Trends

Future Trends:

Smarter Drones

Drones will get better at flying using AI



Longer Flight Time

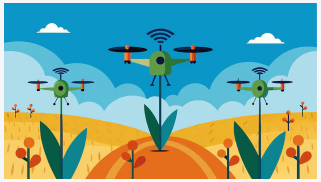
Drones will be able to fly much longer with better batteries and new energy sources without needing to recharge

Delivery Drones

More companies will use drones to deliver packages, food, and medicine directly to homes

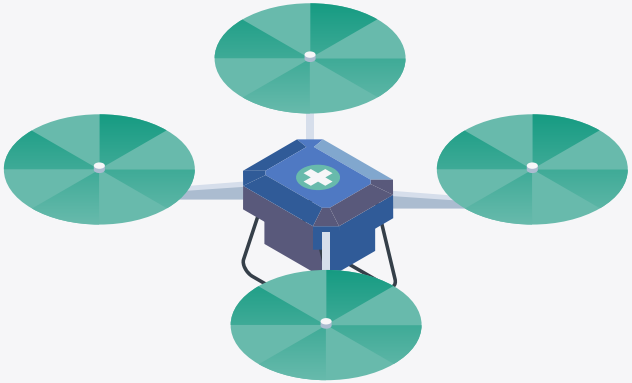
Flying in Groups

Drones will work together to cover big areas to help with search-and-rescue and assist in disasters



THANKS!

DO YOU HAVE ANY QUESTIONS?



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