HARNESSING DRONES FOR GEOSPATIAL DATA COLLECTION

Innovations, Applications, and Challenges

09 September 2024

Dr Bob Entwistle

TALK OUTLINE

Technology overview

Applications

Benefits

Challenges

Future trends

University of Southampton

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WHAT IS A DRONE?

Different Types

WHAT IS A DRONE?

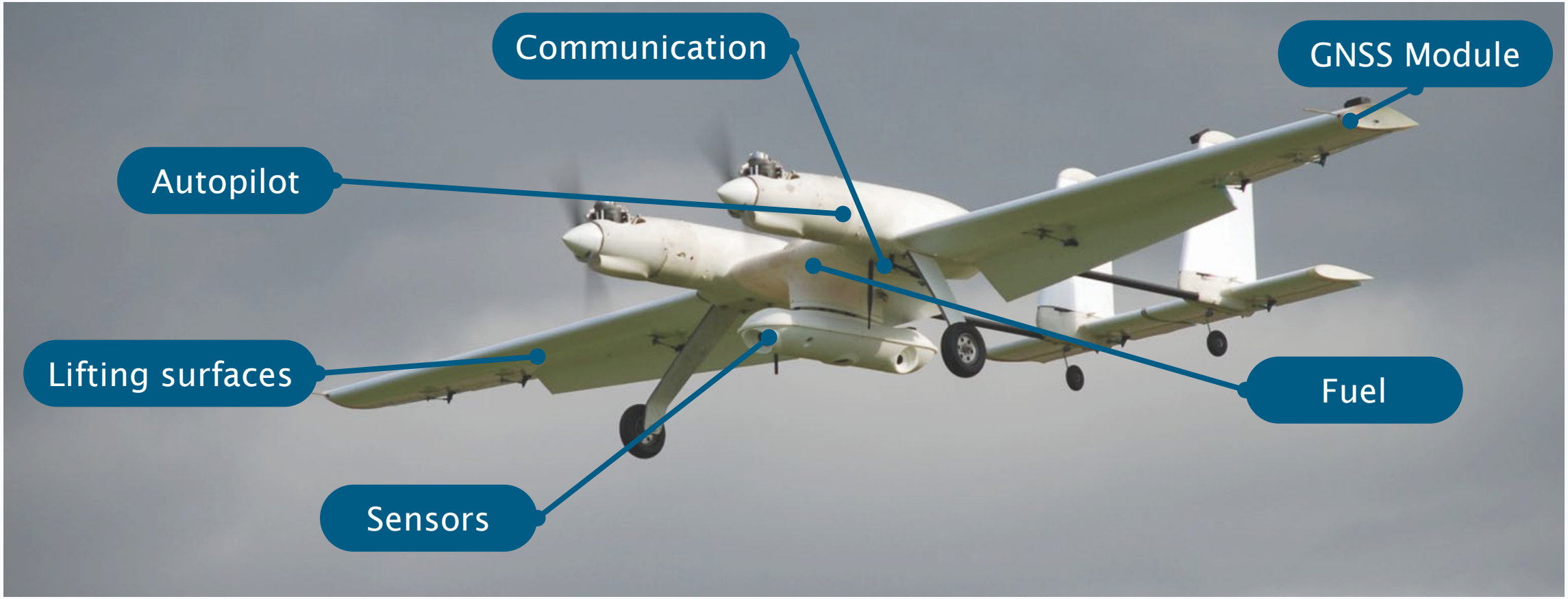
Key Components

WHAT IS A DRONE?

Key Components

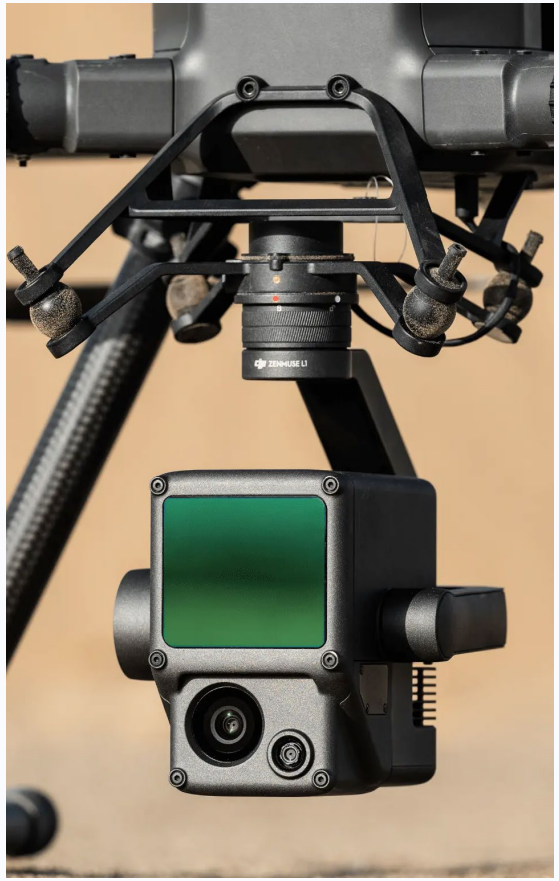
WHAT IS A DRONE?

Key Components



DATA COLLECTION

Sensors

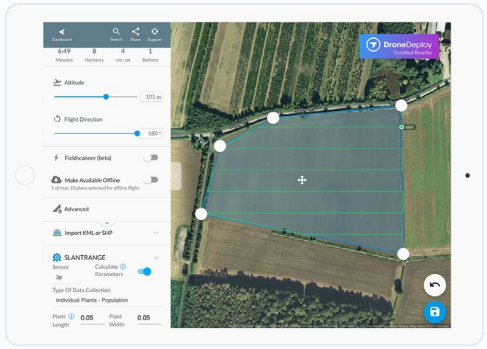


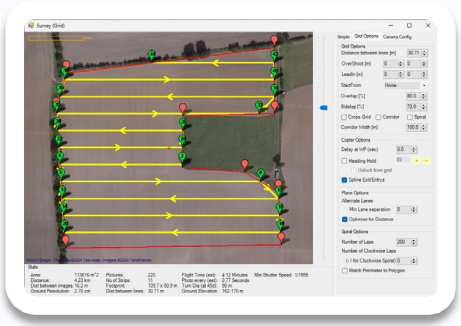
DATA COLLECTION

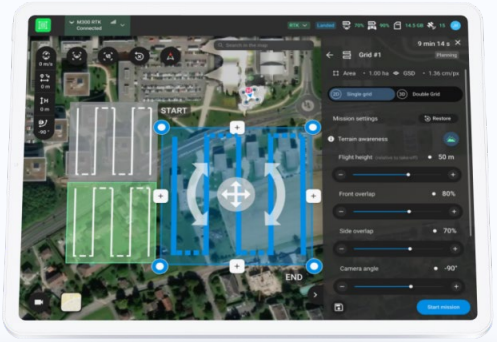
Sensors

DATA COLLECTION

Automation







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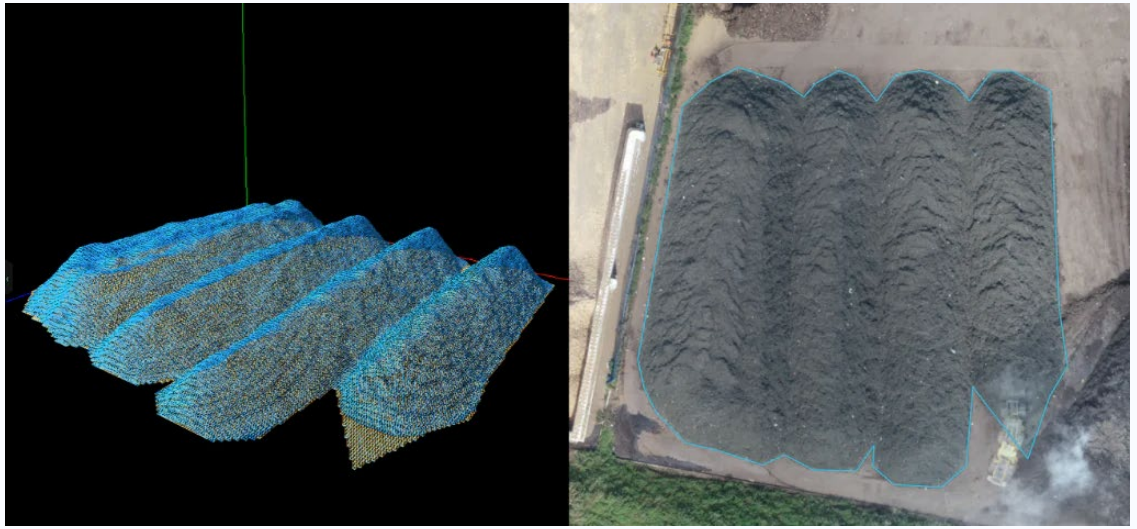
APPLICATIONS

Precision Agriculture

OUTFIELD

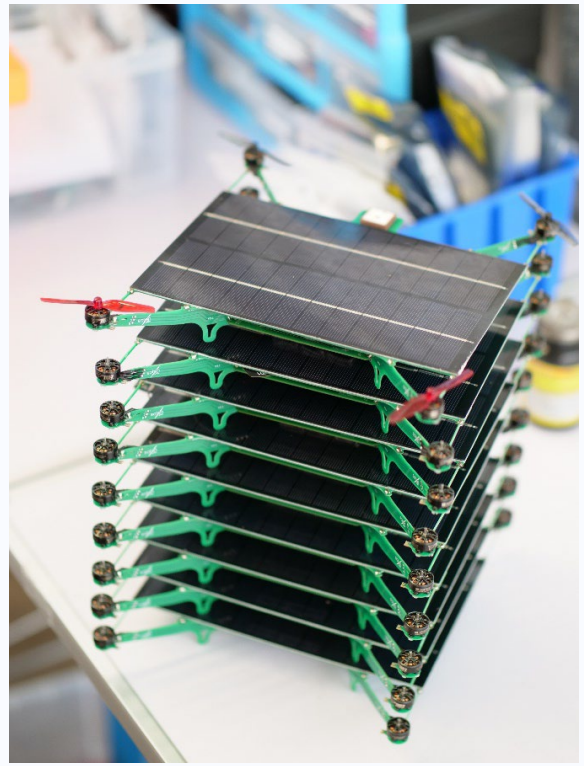
APPLICATIONS

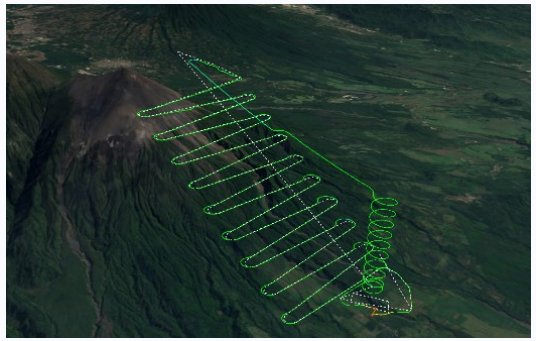
Industry and Construction



APPLICATIONS

Environmental Monitoring





APPLICATIONS

Disaster Management

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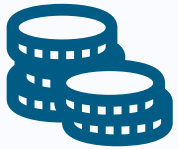
BENEFITS

Accuracy and Precision



Cost Efficiency

Time Efficiency

Repeatability

Scalability

Remote Environments

Below cloud cover

Immediate Access to data

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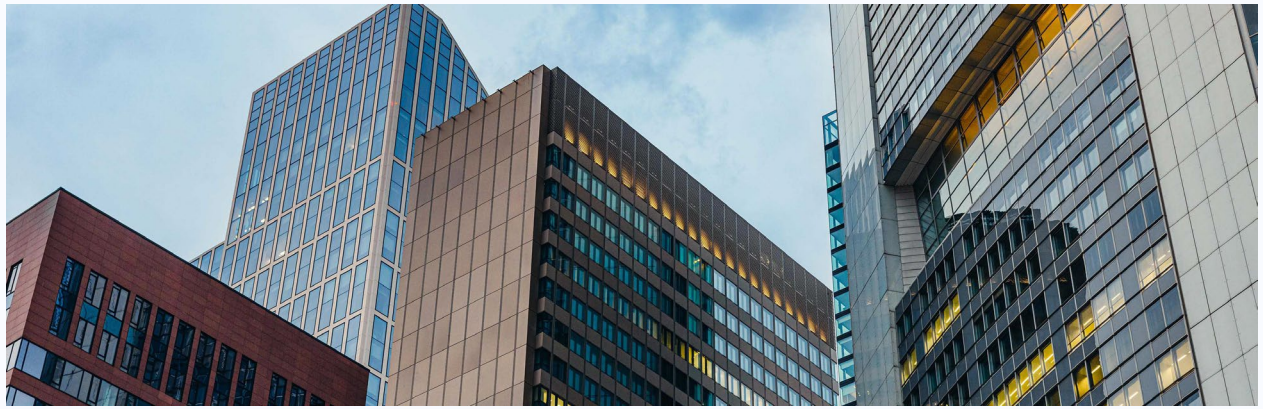
CHALLENGES

Regulations

UK Civil Aviation Authority

CHALLENGES

Technical limitations



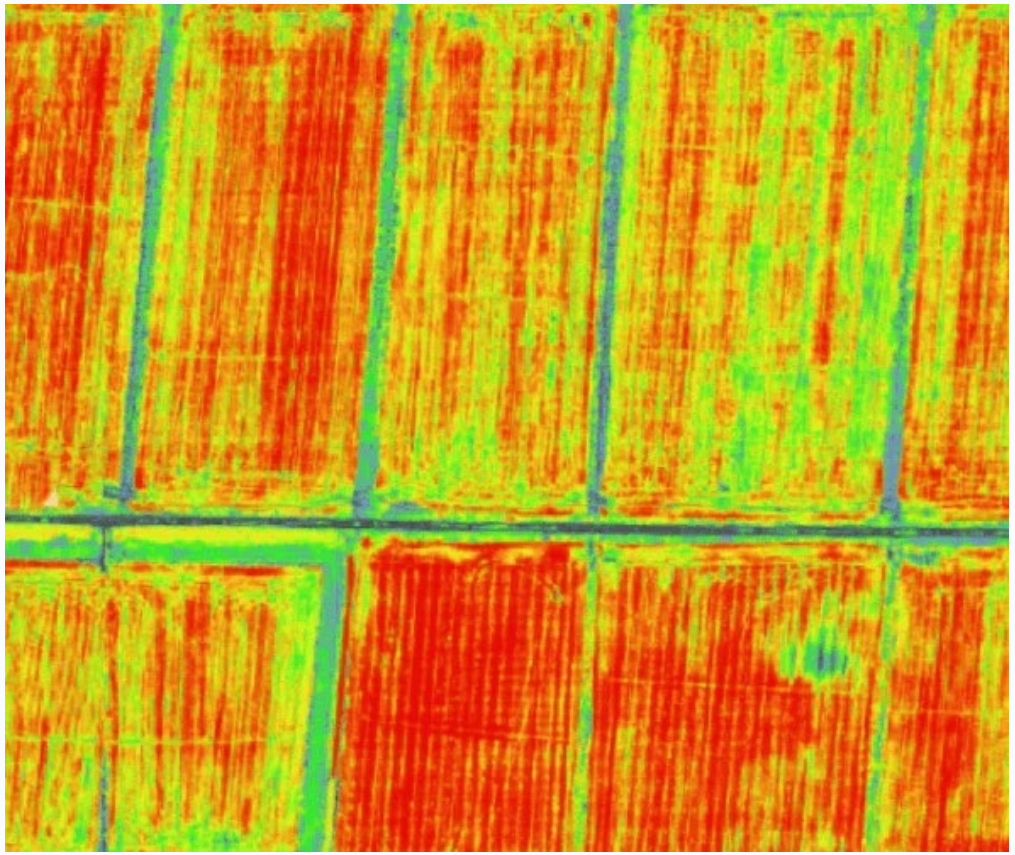
CHALLENGES

Data Processing

An image representing the vast volume of geospatial data gathered using drones from applications like agriculture, construction, environmental monitoring, and disaster management

CHALLENGES

Skill Requirements



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FUTURE TRENDS

YOUR QUESTIONS

Thank you for listening