



Allianz Global Corporate & Specialty SE

DRONES EVERYTHING YOU NEED TO KNOW

Tom Chamberlain
Tony Avery

AGCS Aviation

October 2019

Allianz 



LEARNING OBJECTIVES

- Explain the terminology and technology related to drones and how they are used in today's industry.
- Describe the regulation which applies to drones and their pilots
- Explain and understand the risks and perils that this new technology created
- Understand the specific risks relating to airports and air traffic
- Describe the insurance coverage available and how this is rated by insurance companies
- Understand the potential claims which could happen within this sector





THE DRONE MARKET

AT A GLANCE

\$127Bn

\$1Bn





THE DRONE MARKET

AT A GLANCE

\$127Bn is the value of current business services and labour that are likely to be replaced in the very near future by drone powered solutions (PWC)

\$1Bn is the projected value of the insurance market by 2025 if the growth in drones and industry continues





CONTENT TOPICS

01 TECHNOLOGY AND USES

02 RISKS AND INSURANCE

03 AIRPORTS AND AIR TRAFFIC

04 CLAIMS AND NEAR MISSES

05 THE FUTURE



02

TECHNOLOGY AND USES





TERMINOLOGY & TECHNOLOGY

AT A GLANCE

- UAS
- UAV
- Drone
- RPAS
- FPV



- Return-to-home
- Automation
- Geofencing
- Sense / Avoid
- AirSense

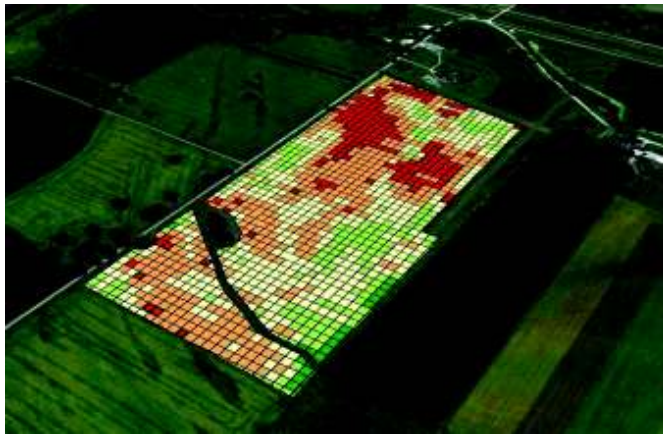
Drones – Everything you need to know and more...



USES

INFRASTRUCTURE AND AGRICULTURE

\$77.6Bn



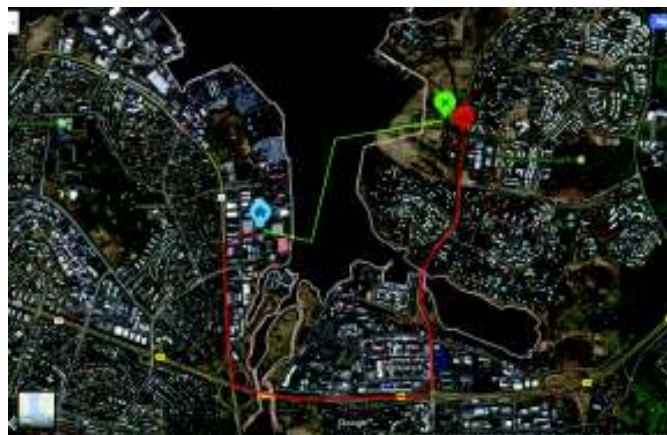
Tom Chamberlain & Tony Avery – Allianz Aviation
Copyright © 2019 Allianz Global Corporate & Specialty SE (All rights reserved)



USES

TRANSPORT AND SECURITY

\$23.5Bn



Drones – Everything you need to know and more...



USES

MEDIA AND TELECOMS

\$15.1Bn



Tom Chamberlain & Tony Avery – Allianz Aviation
Copyright © 2019 Allianz Global Corporate & Specialty SE (All rights reserved)



USES

MINING, INSURANCE AND MORE ...

\$11.1Bn



03

RISKS AND INSURANCE





COMMERCIAL VS RECREATIONAL

UNDERSTANDING THE RISKS

Commercial Operators

Hobbyists



- Liability only
- Hull and Liability
- Optional covers
- PfCO, Drone Code



- Liability only
- Lower limits
- Limited extra covers
- Drone Code



THE DRONE CODE

Legal responsibility lies with the pilot

- **Don't** fly near airports or airfields
- **Remember** to stay below 400ft
- **Observe** your drone at all times
- (stay 150ft from people and property)
- **Never** fly near aircraft
- **Enjoy** responsibly

BE DRONE SAFE




Always keep your drone in sight



This means you can **see** and **avoid** other things while flying

It's against the law to fly your drone over 400ft (120m)



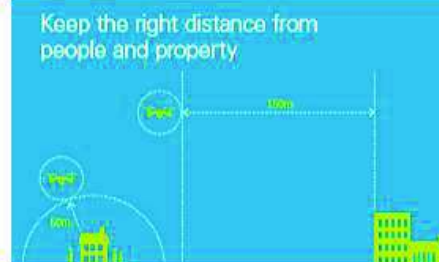
This reduces the likelihood of a **conflict** with manned aircraft

From 30th November 2019 and for drones over 250g, you must pass the drone test and register with the CAA before you fly



Passing the **test** and **registering** will help keep you and others safe

Keep the right distance from people and property



People and properties – **150ft (50m)**
Crowds and built up areas – **500ft (150m)** and **don't overfly**

You are responsible for each flight



Legal responsibility lies with **you**
Failure to fly responsibly could result in **criminal prosecution**

Stay well away from aircraft, airports and airfields when flying any drone.



It is **illegal** to fly them inside the airport's flight restriction zone without permission.
See dronesafe.uk for info

If your drone endangers the safety of an aircraft it is a **criminal offence** and you could go to prison for five years

THE LAW

Legal responsibility lies with the pilot

- 400ft max height – 31/07/2018
- 1km from Airports - 31/07/2018
- 5km extensions along runways - 13/03/2019
- Register drones >250g – 30/11/2019
- Online Safety Test – 30/11/2019
- EC785 / 2004

BE DRONE SAFE

Always keep your drone in sight

It's against the law to fly your drone over 400ft (120m)

From 30th November 2019, drones over 250g, the drone test and register with the CAA before you fly

Passing the test and registering will help keep you and others safe

You are responsible

Legal responsibility lies with you. Failure to fly responsibly could result in criminal prosecution.

Always keep your drone in sight

It's against the law to fly your drone over 400ft (120m)

From 30th November 2019, drones over 250g, the drone test and register with the CAA before you fly

Passing the test and registering will help keep you and others safe

You are responsible

Legal responsibility lies with you. Failure to fly responsibly could result in criminal prosecution.

People and property – 150ft (50m) and don't overfly

aircraft, airports and airfields when flying any drone

It is illegal to fly over an airport or airfield without permission. See drone.maa.caa.co.uk for info.

If your drone endangers the safety of an aircraft it is a criminal offence and you could go to prison for five years.

FPN of £100 for minor drone-related offences

Up to £2500 fine
Up to 5 years in prison

Up to £1000 fine

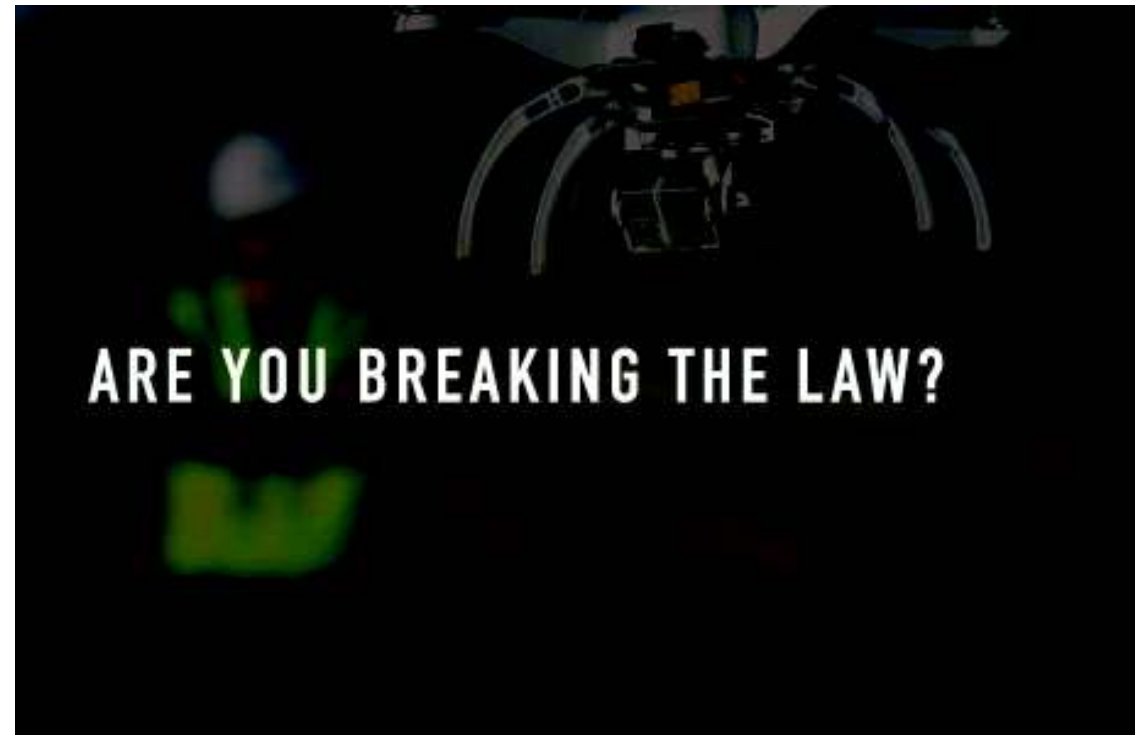




EC785/2004

UAS Operators must comply with EU regulation (EC) 785 / 2004

- Establishes minimum third party insurance requirements
- Applies to all aircraft
- Minimum is related to size/weight of the aircraft
- £0.75m is minimum
- Given risks, most people buy more cover

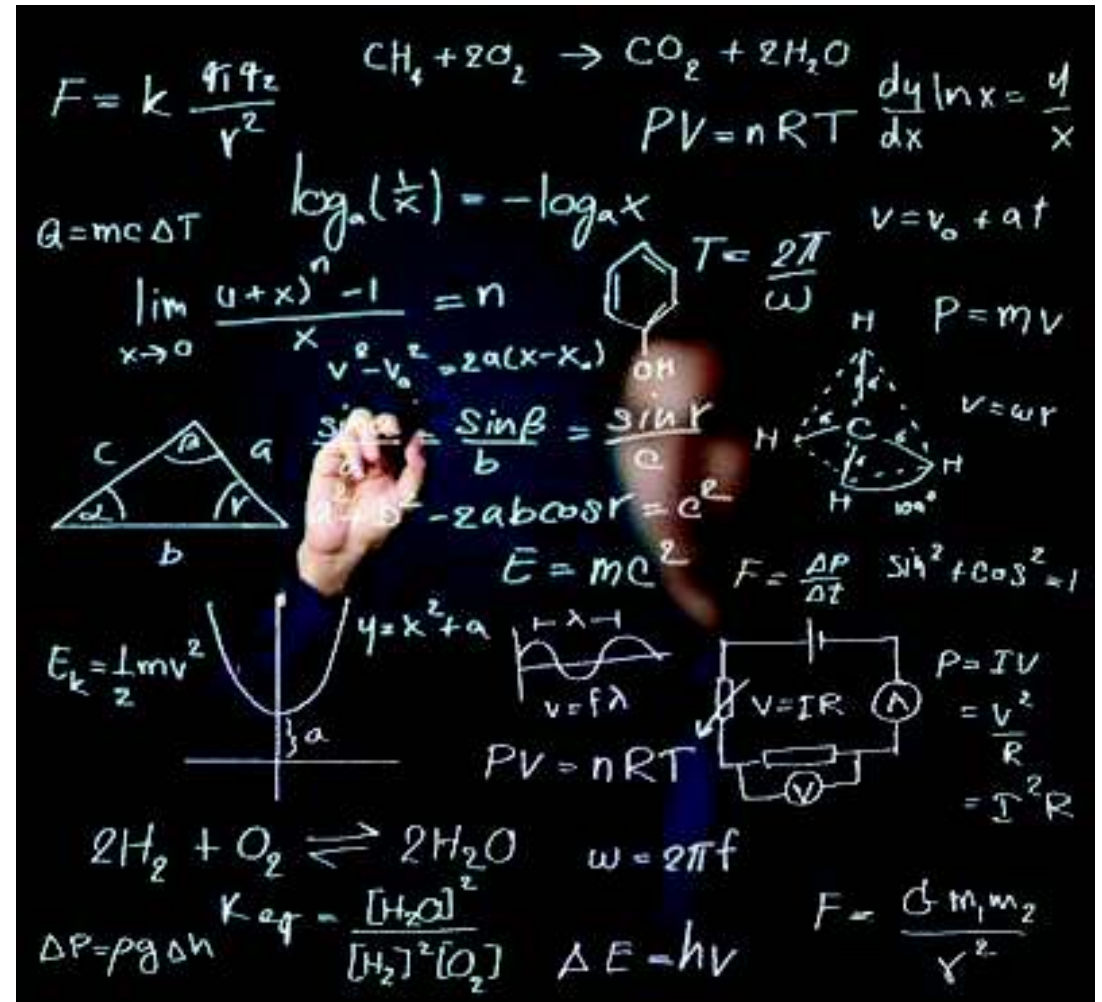




PRICING DRONE INSURANCE

Risk assessment is difficult due to the lack of claims data in the industry

- Value of the drone
- Value of the equipment
- Limit of liability
- Excess level
- Pilot experience
- Type of use
- Area of operation





TRADITIONAL VS NEW MANAGING THE RISKS

Annual Policy



Key selling points

- Comprehensive cover
- Flexible coverage All year round cover
- All risks
- Certainty of cover



Pay-as-you-fly



Key selling points

- Essential cover
- Flexible coverage
- Short term policies
- In flight cover only
- Policy per flight

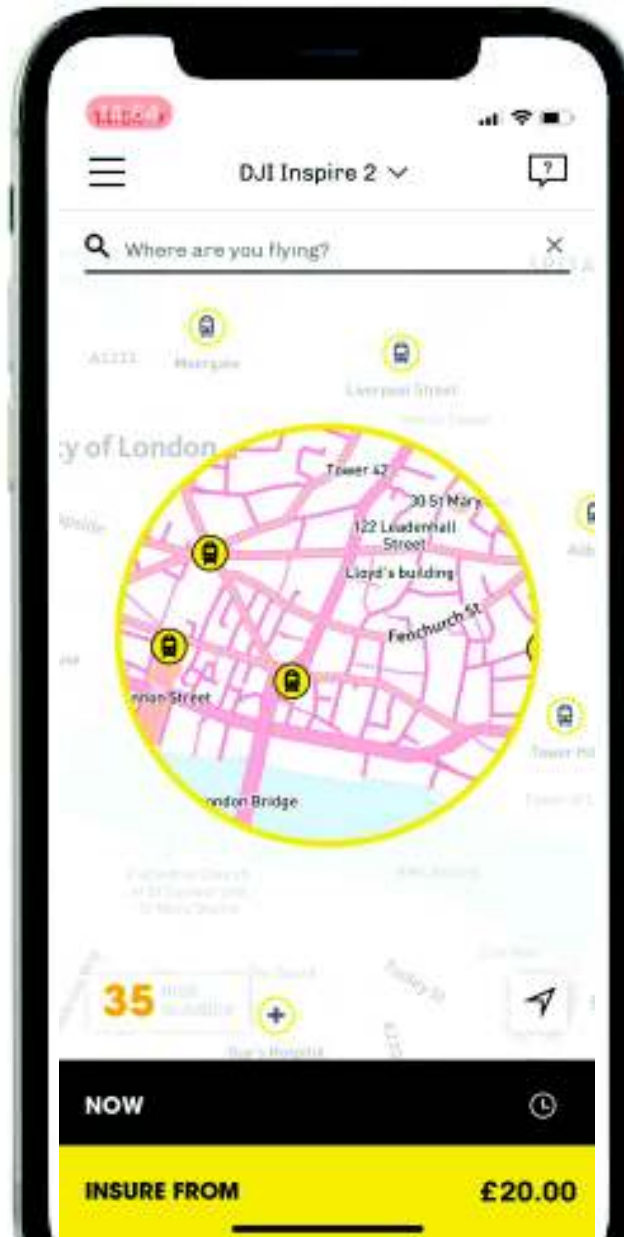


FLOCK COVER

PAY-AS-YOU-FLY

The first real time insurance product

- On the spot pricing
- Flexible Cover
- Insurance purchase in three taps
- Big data pricing
- Weather data
- Building heights
- Population density
- Roads



Pay-As-You-Fly

Predictive Analysis

Real Time Insurance

Big Data Analysis

03

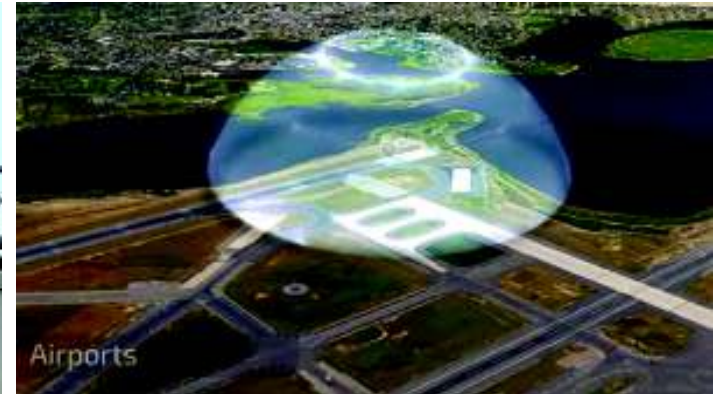
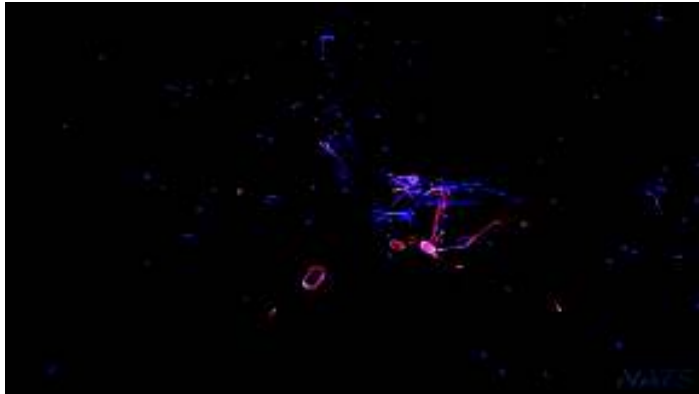
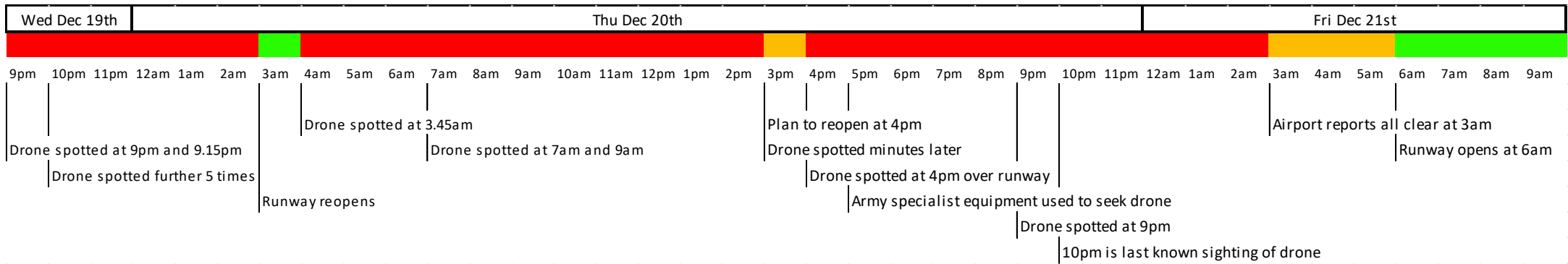
AIRPORTS AND AIR TRAFFIC





AIRPORTS

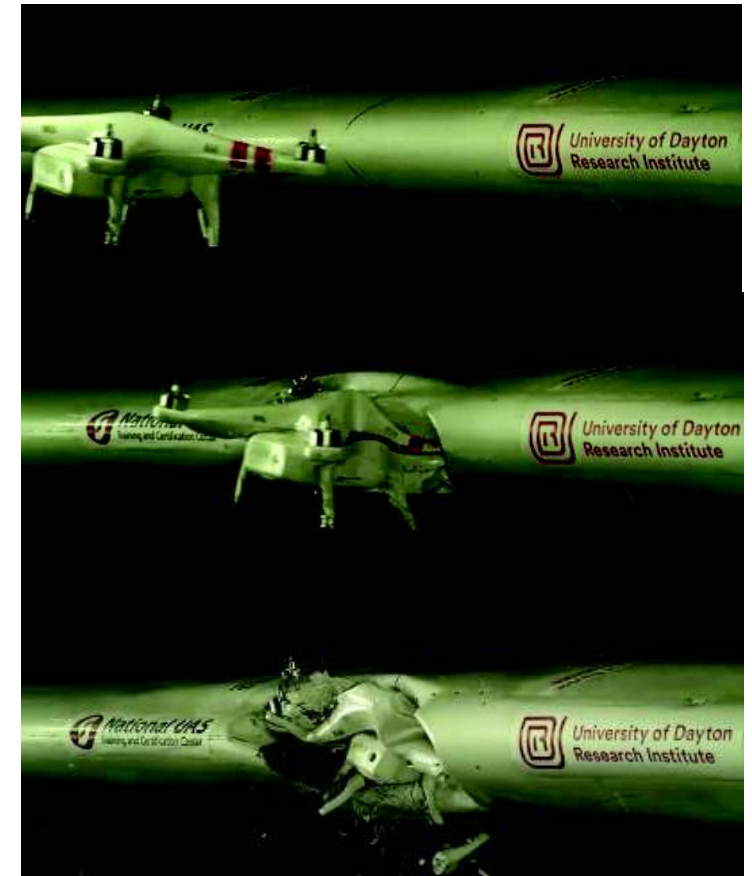
GATWICK - DECEMBER 2018





AIRPORTS

WHAT NOW?





AIR TRAFFIC

NEAR MISSES?

Virgin Atlantic jet carrying more than 260 people in **NEAR-MISS with 2 drones near Heathrow**
14 February 2019



Aero Mexico Boeing 737 passenger jet damaged in **mid air drone collision**
13 December 2018

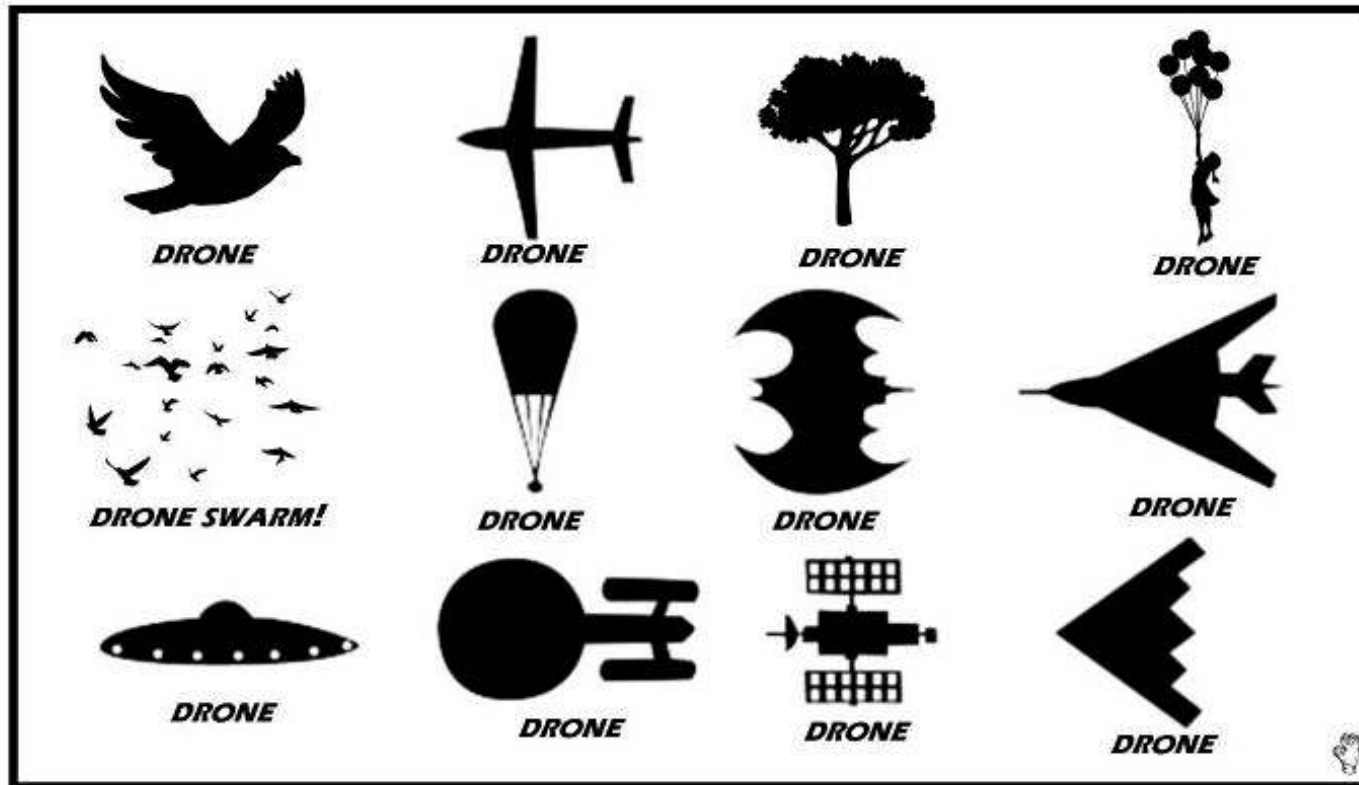




IS IT A BIRD, IS IT A PLANE?

YES, PROBABLY

AIRCRAFT IDENTIFICATION GUIDE FOR AIRLINE PILOTS





04

CLAIMS (OR NEAR MISSES!)



Drones – Everything you need to know and more...



NEAR MISSES

MARCEL HIRSCHER – 7 WORLD CUP TITLES



Tom Chamberlain & Tony Avery – Allianz Aviation
Copyright © 2019 Allianz Global Corporate & Specialty SE (All rights reserved)



Drones – Everything you need to know and more...



NEAR MISSES

HELICOPTER – RDS



Tom Chamberlain & Tony Avery – Allianz Aviation
Copyright © 2019 Allianz Global Corporate & Specialty SE (All rights reserved)



05

THE FUTURE





THE FUTURE OF DRONES

EXPERT KNOWLEDGE



Drones – Everything you need to know and more...



THE FUTURE OF DRONES

EXPERT KNOWLEDGE



Tom Chamberlain & Tony Avery – Allianz Aviation
Copyright © 2019 Allianz Global Corporate & Specialty SE (All rights reserved)



LEARNING OBJECTIVES

- ✓ Explain the terminology and technology related to drones and how they are used in today's industry.
- ✓ Describe the regulation which applies to drones and their pilots
- ✓ Explain and understand the risks and perils that this new technology created
- ✓ Understand the specific risks relating to airports and air traffic
- ✓ Describe the insurance coverage available and how this is rated by insurance companies
- ✓ Understand the potential claims which could happen within this sector



THANK YOU!





ALLIANZ GLOBAL CORPORATE & SPECIALTY


QUESTIONS OR COMMENTS


For further information please contact

Tom Chamberlain

UW Manager
General Aviation and Aerospace




 +44 203 451 3331


 tom.chamberlain@allianz.com

Tony Avery

Senior Underwriter
General Aviation and Aerospace



 +44 203 451 3989

 tony.avery@allianz.com

Follow AGCS



Sign up for 'eUpdate', our regular newsletter on www.agcs.allianz.com