Drones – Everything you need to know

Tom Chamberlain
Tony Avery
$127Bn

$1Bn
$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
TECHNOLOGY AND USES
Technology

- UAS
- UAV
- Drone
- RPAS
- FPV
- Return-to-home
- Automation
- Geofencing
- Sense / Avoid
- AirSense
Infrastructure and Agriculture

$77.6Bn
Transport and Security

$23.5Bn
Media and Telecoms

$15.1Bn
Mining, Insurance and more...

$11.1Bn
RISKS AND INSURANCE
Understanding the risks
Commercial vs Recreational

**Commercial Operators**
- Liability only
- Hull and Liability
- Optional covers
- PfCO, Drone Code

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

Trained

Untrained
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
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

The Law

- Up to £2500 fine
- Up to 5 years in prison
- Up to £1000 fine
- FPN of £100 for minor drone-related offences
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
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
Managing the Risk

Traditional - Annual

Key selling points
• Comprehensive cover
• Flexible coverage
• All year round cover
• All risks
• Certainty of cover

New – Pay as you fly

Key selling points
• Essential cover
• Flexible coverage
• Short term policies
• In flight cover only
• Policy per flight
Flock Cover

- 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
AIRPORTS AND AIR TRAFFIC
<table>
<thead>
<tr>
<th>Time</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wed Dec 19th</td>
<td></td>
</tr>
<tr>
<td>9pm</td>
<td>Drone spotted at 9pm and 9.15pm</td>
</tr>
<tr>
<td>10pm</td>
<td>Drone spotted further 5 times</td>
</tr>
<tr>
<td>11pm</td>
<td>Runway reopens</td>
</tr>
<tr>
<td>Thu Dec 20th</td>
<td></td>
</tr>
<tr>
<td>12am</td>
<td>Drone spotted at 3.45am</td>
</tr>
<tr>
<td>1am</td>
<td>Drone spotted at 7am and 9am</td>
</tr>
<tr>
<td>Fri Dec 21st</td>
<td></td>
</tr>
<tr>
<td>2am</td>
<td>Plan to reopen at 4pm</td>
</tr>
<tr>
<td>3am</td>
<td>Drone spotted minutes later</td>
</tr>
<tr>
<td>4am</td>
<td>Runway reopens</td>
</tr>
<tr>
<td>5am</td>
<td>Army specialist equipment used to seek drone</td>
</tr>
<tr>
<td>6am</td>
<td>Drone spotted at 4pm over runway</td>
</tr>
<tr>
<td>7am</td>
<td>10pm is last known sighting of drone</td>
</tr>
</tbody>
</table>

Drone spotted at 4pm

Runway opens at 6am

Airport reports all clear at 3am
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!
Claims
(or near misses)
Near misses – Marcel Hirscher – 7 World Cup Titles
Near misses – Helicopter - RDS
THE FUTURE
The Future of Drones
The Future of Drones
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