Unmanned Aircraft Systems

Insurance and Risk Management



The Basics

Drones are referred to interchangeably by various names:

- UAS Unmanned Aircraft Systems
- UAV Unmanned Aerial Vehicles
- RPAS Remote Piloted Aerial System

The system refers to the Platform (or aircraft), the Payload (such as a camera or sensor) and the Ground Control Station. UAS is the term the Federal Aviation Administration has adopted.

The UAS Industry in 2015

Much has been written about the potential for UAS. The Association for Unmanned Vehicle Systems International (AUVSI) predicts \$83bn economic impact over the next 10 years creating 70,000 jobs. Furthermore, they anticipate 175,000 UAS in commercial use by 2035. Global Aerospace has seen submissions from each of the following industry sectors:

> Agriculture

▶ Conservation

▶ Construction

Disaster Relief

▶ Defense / Border Patrol

Energy

▶ Engineering

Forestry

> Forest Fire

▶ Mapping / Survey

▶ Mining

➤ Movie / Media

Municipal Authorities

Parcel Delivery

Photography/ Videography

▶ Realty

> Search and Rescue

Security

▶ Sports Teams

▶ Utility Companies

> 3rd World Medicine Delivery

Current Regulatory Overview

According to the Federal Aviation Administration (FAA), no UAS can be flown for business or commercial purposes without specific authorization. Such authorization can be obtained via either a Certificate of Airworthiness (for public entities) or by Special Exemption under Section 333 of the 2012 FAA Modernization and Reform Act (for commercial entities). So far the FAA has granted approval for around 500 public and numerous commercial entities.

While insurance is available for operators who do not hold FAA approval, Global Aerospace is applying similar risk mitigating criteria to that outlined in the FAA's Notice of Proposed Rulemaking. This includes ensuring appropriate operator experience and managing de-confliction from persons and property.

Risk Management

There are some inexpensive and easily attainable risk management solutions to help smaller UAS users operate safely:

- Training understanding the hazards and operating safely
- Safety Management Systems (SMS) pre-flight checklists, logbooks and a Standard Operating Procedure (SOP)
- Maintenance ensure the drone is inspected and safe for operation
- Environmental Hazards limit proximity to people, airports, congested areas and government facilities
- Privacy Issues operate in a responsible and ethical manner

Many in the UAS industry are looking to insurance carriers to be the driving force and ultimate arbiter of the various risk management initiatives.



Underwriting Considerations

The principle items Global Aerospace will consider when assessing an unmanned risk are:

- The overall professionalism with which the operator is embarking on UAS operations
- The capabilities of the model to be operated
- The experience and training of the operator
- · What the UAS will be used for
- The environment in which it will be operated (i.e. proximity to persons or property).

Global Aerospace has a range of application forms to cover all types of unmanned risk.

Partnership Opportunites

Insuring the UAS risk category can be a challenging task. Global Aerospace is available to discuss ways in which we can help non-aviation insurance carriers navigate this complex environment.

About Global Aerospace

Global Aerospace is a leading provider of aerospace insurance with a worldwide portfolio of clients who are engaged in every aspect of the aviation and aerospace industries. Headquartered in London, we have offices in Canada, Cologne, Paris, Zurich and throughout the United States. Across the world we employ over 350 people. Our experience dates back to the 1920's and our underwriting is backed by a pool of high quality insurance companies representing some of the most respected names in the business. For additional information about Global Aerospace, please visit **www.global-aero.com**. To learn more about the company's SM4 safety program, please visit **sm4.global-aero.com**.

Visit our website to download the Global Aerospace White Paper:

Unmanned Aviation Risk Management, Accident Prevention and Insurance

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