

# UNMANNED AIRCRAFT SERVICES

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## FROM SGS

Unmanned Aerial Vehicles (UAVs), also referred to as Unmanned Aircraft Systems (UAS) or RPAS (Remotely Piloted Aircraft System) are an emerging technology that is growing exponentially around the world.

Unmanned aircraft offer a new way to perform operations such as aerial photography, surveying, power line inspection, border patrol, maintenance assessment, and other roles which have previously required using an aircraft or a person working at heights or in dangerous situations. For these operations unmanned aircraft offer lower risk to personnel and cost efficiency over mobilising aircraft. But they are not without risks of their own, with mishap rates at up to 300 times greater than general aviation.

### INCORPORATING UNMANNED AIRCRAFT INTO YOUR OPERATIONS

Government regulators are currently grappling with how to regulate a market that ranges from sub-2kg quad copters to the 6.7 ton Global Hawk, in order to promote safety, professionalism and seamless integration into civil airspace. With the unmanned aircraft industry expanding so rapidly, there can be difficulty distinguishing between professional, appropriately licensed, approved and insured operators, and those who do are not.

Unmanned aircraft offer organisations a cost effective method of gathering data, and correctly implemented, can lead to organisational efficiency and lower risk. For organisations planning to employ unmanned aircraft in their operations, we can:

- Provide advice on how to safely integrate unmanned aircraft to provide cost efficiency and remove personnel from high-risk roles
- Audit your unmanned aircraft operators (the UOC holder) to confirm their safety and quality

standards, insurance, maintenance and operational procedures

- Writing unmanned aircraft standards, policy and guidelines to control risk
- Assist with risk analysis onsite and selection of appropriate equipment
- Confirm your operations meet regulatory requirements

### WHAT LEVELS OF SURVEILLANCE ARE REQUIRED?

To ensure that the level of safety surveillance is appropriate to the operation, we recommend a two tiered approach to monitoring unmanned aircraft operations.

Where the unmanned aircraft to be used are of low-to-moderate value and are to be used in low risk environments, we can assist with a desktop review to confirm that the operator complies with regulatory requirements, has appropriate insurance and has adequate safety procedures in place.



This review typically includes:

- A review of the organisational structure, roles, responsibilities and qualifications of chief and maintenance controllers
- Management Systems, including safety documentation
- Controller personnel, including qualification and experience levels
- Emergency Procedures
- Validity of UOC, insurance and other legal documentation
- Previous accidents, incidents, non-compliances or legal action pending
- Risk Assessment procedures and samples including Job Safety Analysis pertaining to specific operations if required

For operations which use high-value unmanned aircraft or operations which operate near people or sensitive locations, it is recommended to conduct an onsite audit to verify the following additional items:

- Unmanned aircraft inspection and flight observation
- Maintenance, including equipment, tools, facilities, inspection schedules, etc
- Hazard assessment and a review how the operation could intersect with controlled airspace

## SERVICES FOR UNMANNED AIRCRAFT OPERATORS

For unmanned aircraft operators interested in providing services to large, safety conscious enterprises such as the resources and energy sector, we can assist you with differentiating the quality of your services by establishing safety management systems, job safety analysis, and provide guidance on obtaining your UOC.

We can assist you with:

- Gap Analysis against a range of industry standards and best practice, as well as assistance in achieving compliance
- Writing a comprehensive manual of standards and operations manual, either integrated or as stand alone documents
- Implementing a comprehensive risk assessment process compliant to



the ICAO SMM, OHSAS 18000, ISO 31000 and other regulations and standards. This process includes an interactive risk matrix that can produce Job Safety Assessments (JSAs) in minutes, and incorporates an online repository to store previous JSAs, as well as making them available to clients

- Training in unmanned aircraft threat and error management (CRM / Human Factors), Safety Management Systems, Risk Management Principals and other specialist areas appropriate to high-value unmanned aircraft operations
- Actionable safety advice, and demonstrating due care in the conduct of your operations

We are continually involved with the latest research and can provide guidance on equipment and emerging

technologies to help you keep your competitive advantage over traditional aircraft services.

### WHY SGS?

SGS is the world's leading inspection, verification, testing and certification company. SGS is recognised as the global benchmark for quality and integrity. With more than 80 000 employees, SGS operates a network of over 1 650 offices and laboratories around the world.

**TO FIND OUT MORE ABOUT HOW WE CAN HELP IMPROVE THE SAFETY AND RELIABILITY OF YOUR FACILITIES, CONTACT [AVIATION.SAFETY@SGS.COM](mailto:AVIATION.SAFETY@SGS.COM) OR VISIT [WWW.SGS.COM/AVIATION](http://WWW.SGS.COM/AVIATION).**



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WHEN YOU NEED TO BE SURE

