



## **Experienced pilots still essential despite autonomous trend**

2018 is expected to herald the greater emergence of more autonomous drone technology, but Sky Revolutions Director Ben Gorham says, despite the trend, the presence of an experienced pilot remains essential.

This year, it is predicted we will see stronger processing power that will allow drones to become smart sensors, integrating computer vision and neural network technologies to analyse data on the surroundings and mission in real time, autonomously, without the need for human direction. This adds up to drones independently making decisions, leading to what some forecast will be swarm technology, with factories comprising workforces of drones, performing their tasks and working together.

That futuristic vision may not be right for every sector, but regardless of sector, it's a busy time for drone operators and their resources. The need for skilled personnel is growing in tandem.

"The whole industry is getting busier," says Gorham. "We've been going over three years now and January was the busiest month we have had."

The benefits of drone technologies have grown increasingly apparent to the utility sector, and because of the broader commercial appeal have attracted newcomers into contention.

Peterborough-based Sky Revolutions offers surveying services, aerial filming, and high level repair and maintenance to construction, mining, utilities, telecoms, energy, renewables and facilities management sectors.

"We would consider ourselves to be part of the top tier in the UK. We note there is an increasing influx of qualified drone pilots at the moment. We have been at that position for a couple of years, when initially setting up as a drone surveying company - one of the first in the UK."

"There are other companies like us and at our level, then there is another band of the industry which is more small scale. Many of these are skilled and we employ some on a sub-contracting basis when



we need them. The energy industry is in the very early stages of drone adoption and seems to want additional comfort by placing orders with large companies - but the drone industry itself is still embryonic.”

Gorham is keen to point out the difference between qualified and experienced pilots. Because of the popularity of the technology, there appears to be more of the former than the latter at the current time.

“There are probably 4-5,000 qualified pilots but the difficulty for us (and everyone else) is getting people who have done the job. A large number have become qualified, but we’ve got pilots who worked for us, myself included, who have done numerous complex aerial surveying jobs with high-end equipment. We generally fly AscTec Falcon 8s which are regarded as a market leader.”

The aforementioned advances in software technology, and the push for autonomous drones is another strand coming into play. There is some opinion that indicates a gradual minimising of the human factor to drone operations, but taking the landscape as a whole, experienced pilots are still highly relevant.

“We look at various platforms and software systems that we integrate for projects - such as Drone Deploy, but we don’t offer it ourselves at the moment.”

“Many of the new software systems are there to make a flight autonomous or to manage very large volumes of data in the cloud, but I believe the focus must remain on pilot competency for some time yet; improving the quality of the data before shaping the systems that deliver it.

“Autonomous systems do take a lot of the emphasis off the pilot, but you have to look at things as if they might not always go to plan, and you need to be confident in the pilots’ competence to take over, despite over-ride buttons and fail-safes.”

Is there more that the industry could put in place, in terms of grading certification according to experience accumulated, so that novice pilots don’t get in over their head?

Gorham agrees, and his company has systems in place to reduce the chance of mishap.



“It comes down to experience. We would never put a newly qualified pilot on a job on his own. Every job we do has teams in pairs and there will always be someone with a wealth of experience paired with someone new.”

“The industry is full of people now getting qualified and buying low-end systems and over-offering what they can do and going out solo.”

“That’s all very well when things go fine, but the industry needs to wake up to the complex factors that can impede a survey. The problems they create are best dealt with by experienced pilots.”

“We wouldn’t want to see companies not working 100 per cent safely and damaging industry reputation. We need to police ourselves properly.”

Utilities, in a rapidly transforming energy system, have never been under more pressure to improve efficiencies and bottom line, with their traditional means of operating under severe disruption from variables such as renewable and distributed energy and the forces unleashed by Internet and Cloud technology.

It means what drones can do is becoming increasingly attractive.

Yet Gorham’s background is in construction and he’s noticed that the construction industry has been quicker to take on the technology than actors in the utility area.

We are pitching for quite a number of jobs for power lines and telecoms – the utility sector has been dubious previously, and relied on the more expensive option of helicopters, but I think that has gradually changed – faith in the drone industry and the expectancy in the the data quality they are going to get has been there for some time and the larger energy companies are realising it.”

“The confidence in the drone industry is there now and drones have been safe for a number of years with fail safes and systems built into the equipment. Its recklessness and pilot error that generally causes issues.”



The technology Sky Revolutions uses is also adept at capturing faults in urban heat networks, with electrical thermal imaging cameras also used for the same purpose to identify hot spots on solar panels, as well as problems with resistors on power lines.

Just last week Airports Council International (ACI) Europe said today there was "an urgent need" for a European rulebook on drones as usage continues to take off.

In a report released last Monday, the trade body for European airports said the number of drones has seen a vast rise over the last five years, and is expected to increase 10-fold globally from 2015, to almost 68m in 2021.

“When you work in city centres or built up area it’s generally done with an Operational Safety Case. The ACI wants a European safety rulebook finalised soon to ensure a common approach, and to avoid member states setting up separate rules.”

Gorham says it’s splitting the industry at the moment, but it is necessary to resolve for progress sake.

Meanwhile towards the end of last year, [the UK government unveiled plans to set new rules for regulating drones](#), with those flying them having to pass safety tests. A new registry for owners of large drones will also be mandatory.

Regulation is, therefore accelerating, and facilitating a more viable drone service, that can continue to bolster faith in this burgeoning industry.

It also has crucial government backing with aviation minister Baroness Sugg stating last month, "Drones have great potential and we want to do everything possible to harness the benefits of this technology as it develops."

Ends.



## Notes for Editors

### **Sky Revolutions Ltd.**

Sky Revolutions is one of the UK's most authoritative voices in aerial imaging, surveying, and aerial surveying. The company offers exceptional quality multi-sector time lapse, aerial imaging, and surveying services to private and public sector institutions, Europe-wide.

Sky Revolutions is a dedicated team of professionals with more than 20 years' experience in construction surveying. Valued for their specialist surveying skills, Sky Revolutions offers effective advice and data interpretation as well as filming, mapping and CAD services.

Sky Revolutions is known for leading the way with aerial imaging and remains the only organisation using 100' masts to provide a free standing, at-height image solution for large construction sites. Highly qualified and accredited, its UAS (Unmanned Aircraft Systems) expertise helps customers access complex and often hazardous environments, see and record the condition of assets from a birds' eye view, and make informed assessments quickly, safely and cost-effectively. The company uses some of the most sophisticated drones in the market to capture ultra-high definition images at a fraction of the cost of traditional aircraft surveys and with fewer risks than platform or scaffold use.

Sky Revolutions was one of the first UK organisations to realise the benefits of drones in surveying. Drones or UAVs (Unmanned Aerial Vehicles) offer significant advantages in surveying and high-level inspection.

To find out more, or to request original files, film, or image samples, or to request an interview or comment, please contact:

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