

Drone Industry Needs a Coherent Voice — and Some Interest From Investors

By Lord Waverley

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Drones are changing the way in which we interact with one another. From commercial applications to lifesaving transportation, drones are a reality which cannot be ignored. The potential of these remote-controlled flying robots is unlimited.

But to unlock the full potential of this industry, a rapid change in perception and regulation is needed.

Drones are mainly thought of as toys and regulated as such. The technology arrived in the form of children's playthings some 10 years ago. Ever since, we have been on a learning curve.

Business and industry have learned that toy drones cannot (yet) handle industrial tasks; they are too fragile. Negative public perception and a lack of interest is holding the industry back.

A recent PwC report concluded that by 2030, drones could increase UK GDP by some £42bn. Companies have been founded to produce drones for commercial use — and it is clear that we face a future which will include this technology.

The flying machines are being used daily to boost productivity and growth. In cities, global giants such as Amazon are changing logistics through domestic drone deliveries. In rural areas, farmers are using them as eyes in the sky to spot weeds, then deliver minimum levels of pesticides.

One can easily imagine the London Port Authority using the technology to undertake volumetric analyses and generate 3D scans of the Thames and the Thames Barrier.

Britain is a nation that exports standards. The UK, through H Robotics, has developed the first entirely modular, interoperable drone. Regardless of the application, the potential for productivity and growth is unparalleled. And yet this technology is still greeted with suspicion and alarm, rather than the needed intrigue.

Despite the relative youth of the industry, the technology has advanced beyond recognition. Drones are still limited by human input, but it is only a matter of time before they are powered by artificial intelligence.

AI has the potential to change life on a scale similar to that of the Industrial Revolution. Once drones have the capacity to make decisions and to function independently of humans, the benefits to business could be huge.

The military application of AI-run drones is a widely debated subject. Through its Horizon 2020 research and innovation programme, the European Union has funded an AI-based drone project to autonomously patrol Europe's borders, identifying individuals and determining whether they represent a security threat. This was once the domain of science fiction; now it's a reality that we must face.

Companies and governments need autonomous flight paths to be consistent, so data becomes comparable over time. Manual flying precludes good data management. Autonomously flown drones will be essential in the gathering of digital audit and evidence trails.

Professor Stephen Hawking once wrote in reference to AI drones: "Once this Pandora's box is opened, it will be hard to close." In the spirit of these words, we must now look beyond the

negative headlines of drone misuse at airports and master the use of the technology before it becomes a threat.

As industrial use takes off, we need to change the way in which we think. We need to see bilateral co-operation between governments in providing a universal legislative framework which safeguards security but doesn't stifle innovation and development.

The British police and fire departments currently rely on Chinese-manufactured toy drones. They have discovered that these drones are not fit for purpose. In addition, the Pentagon, the MOD and the White House have signalled data-integrity problems.

While governments are addressing the legislative and regulatory gaps, it could be argued that — as we have seen in other tech sectors — public policymakers are failing to keep up with the speed of the market. Rushing to fill legislative voids, without consultation or consideration of future applications, will suffocate this promising industry.

Drones could be used to better manage urban construction, large infrastructure projects, building inspections and more, but the law lumps toys and industrial tools in the same category.

The lack of a singular, authoritative industry voice is another stumbling block. In some sectors, drones have failed to meet expectations because of security and privacy concerns. An industry voice could provide details of the safeguards, training and standards needed.

Regulators could require that all drones have height and distance limiters. The airspace is becoming increasingly controlled by mandatory geofencing. But this lacks nuance. If a drone is flying on controlled autonomous pathways at, say, 100 feet above a local construction site, and is under the control of the building company concerned, it should pose no danger to air traffic.

In light of the negative perceptions held by the media, businesses — through fear of reputational damage — have put off investment. Ministers need to be much more proactive in promoting the commercial opportunities here. Policymakers have for too long focused on reacting to concerns, rather than providing practical industry-led policy solutions that encourage business growth.

One of the biggest challenges faced by the drone industry is the lack of interest in research and development. Here the policy leaders need to act to encourage skills development and assist in countering negative perceptions.

When it comes to commercial applications, it is universally acknowledged that fear of potential misuse is holding the industry back.

We are seeing innovation in the design and manufacturing of drones, but little is being done to train staff in the technology. Without investment in accredited training programmes, businesses will be unable to ensure maximum commercial output.

I am encouraged by some aspects of the UK's Drones Bills, but I fear that if we continue down the path of reactive legislation, without international co-operation and with limited foresight of future opportunities, such legislation could prevent benefits from being realised.

The UK has a proud record as a global leader in emerging technologies. If policymakers and industry leaders can come together to provide the investment that is needed, and legislation can ensure public safety, the next important thing is a change in perception: the industry

should inspire innovation and development. Then we may allow this evolving industry to improve our lives better and make our businesses more efficient in years to come.