



The Future of Drones | Expert Predictions for 2016

There's no denying that 2015 was a huge year for drones. From the FAA granting over a thousand exemptions to businesses hoping to use drones, to the requirement of registration recently taking effect, drones are here, and likely here to stay. Millions of pilots were born across the world, and the industry only continues to grow.

What does this mean in the commercial sector as well as the consumer sector? We reached out to a few of our expert friends to get their opinions on the booming aerial machines. We asked them their thoughts on where things are headed, as well as their opinion on FAA regulation and how it will affect the world of drones in 2016. Keep reading below to see what they have to say.



Ian Smith

[Drone Deploy](#)

2016 should bring significant changes to the drone industry. More and more businesses are realizing that you can find incredible value in lower-cost drones (<\$15,000). OEMs like DJI manufacture drones ranging from ~\$700-\$6,500 that have been successfully 'put to work' in industries like agriculture, construction, mining, and professional land surveying. The capabilities of these machines are increasing rapidly with new sensor technology, tighter integration, and seamless software support. Look for DJI competitors

like 3DRobotics and Parrot to innovate but continue to play catch-up to DJI's dominating share of the worldwide registered commercial drone market. There will be a much larger emphasis on 'commercial' drones in 2016 than in years past due to impending FAA regulation.

Lastly, drone software companies will start to gain more traction by empowering businesses worldwide to make use of the drone's data by transforming it into actionable information in the form of easily-shared orthomosaic maps, digital elevation models, and 3D models. Companies like DroneDeploy have been doing this since 2014 and recently announced that they processed over one million acres of drone imagery for their clients in 6 months.

Precision Hawk



Patrick Lohman, VP of Partnerships

2016 will be a watershed year for drones. Commercially, we expect drones to continue impacting many large industries, particularly agriculture, insurance and energy. Large enterprises within these industries will further incorporate UAV technology into their existing workflows with an emphasis on using the data to conserve resources and make better business decisions. As a direct result of this growing demand as well as current federal regulations, we expect large growth in our drone servicing model and will continue building automated analysis applications to simplify the process for endusers. The FAA is expected to propose new regulations for commercial drones in 2016 which will increase business opportunities for the entire industry

Odyssey Toys



Sal Irigoyen

In 2016, we will see many of the smart features found in high end drones become available in consumer models. These features include hovering, one direction mode, auto fly where the drone moves in a designated flight path, return to home, and most prevalent, virtual reality. On the virtual reality side, we will see goggles immersed in the video streaming of drones, whether live or after filming a flight through a smartphone and corresponding app. Users will be able to live in a virtual reality 3D world.

We also anticipate prices dropping and in some instances, dropping quite dramatically. Video

streaming will be much less expensive. And, most importantly, video quality will increase while costs remain the same. For example, if a company is currently selling a drone with a really inexpensive 300K camera for \$100, this year we will see that same drone being sold for \$100, but with a HD 720P camera. We are also anticipating sales to double or triple in the coming year.

The Boyd Company



John Boyd Jr

Drones are a hot-button issue today whether related to the war on terror, tracking felons on the run or monitoring illegal immigration from Mexico. Reminiscent of George Orwell's "1984," legislators on both sides of the political isle have also been weighing in on privacy concerns — the idea of government spying on its citizens.

Often overshadowed by these discussions is the huge economic development potential of the drone industry — with applications ranging from agriculture to engineering, law enforcement, oceanography, conservation and to things we haven't even thought of yet — to create attractive new research, manufacturing and service jobs.

The use of remotely piloted aircraft was pioneered by the military, but the potential economic development impact from commercializing drone technology is staggering. The Association for Unmanned Vehicle Systems International based in Arlington, VA, has estimated the industry could generate more than \$13.6 billion in activity in the first two years after the FAA sets ground rules for their use which it proposed in 2015.

In linking the nascent UAV industry to selected target sectors and U.S. geographies, our firm is currently focusing heavily on agricultural applications of drones in East Washington State and its vast farming acreages and long history in the agriculture sector. It is already well-established that using drones for crop surveillance can drastically increase farm crop yields while minimizing the cost of walking the fields or airplane fly-over filming.

Aside from a number of defense contractors getting into the civilian drone market, SZ DJI Technology Co. has become the world's biggest consumer drone maker by revenue, selling thousands of its 2.8-pound, square-foot devices for about \$1,000 each. In the process, it also has become the first Chinese brand to pioneer a major new global consumer-product category.

Major players in the agricultural drone market include: Oregon-based HoneyComb; Indiana-based Precision Hawk; Delair-Tech of Toulouse, France; Minnesota-based Farm Intelligence2; Swiss-based SenseFly; Oregon-based Aerial Technology International and Orbital Corp. of Perth, Australia.

Federal regulations are never are good sign for any industry but the focus on drones owned by consumers should not be a mitigating factor for the major commercial thrust of this nascent industry having great job and economic development potential.

[Float Avionics](#)



Chuck Williams

Consumer-wise, the market only seems to be headed upwards, though I think we'll see some trimming of all the 'fluff' companies that are pulling out drones that look like phantoms, have mediocre features etc. Affordability is going to continue to improve and so these will show up in the hands of more and more people looking for fun and with the dreams of entrepreneurship. The drone revolution right now is similar to the previous DSLR revolution which made quality photography tools (and eventually video) much more accessible to the consumer (and in turn led many of them to believe they could make a business out of it). I believe the same thing will happen with drones in the consumer space. Also, look for the racing and stunt sections of the hobbyist drone

owners to receive a lot of growth this year.

Concerning features and releases, DJI will surely come out with an upgraded inspire (which leans more towards the commercial markets) and I think 3dr will bounce back with another release as well. GoPro is set to release their first drone in 2016 and it will be interesting to see if they can show something that's compelling and gives someone reason to buy aside from their brand name. 4k video will become a near-requirement by the consumer and I think autonomous options will increase significantly as well.

Concerning commercial predictions, the biggest thing to watch out for this year is the FAA's scheduled release of regulations and requirements for commercially operating drones in the US. The 333 exemptions have been quite popular and I expect we will see a flood of interest and investment into the commercial side of drone usage assuming the regulations aren't too stringent, which they're not expected to be. This is the bronze age of drone use in the commercial sector and we're going to see people exploring options like laser scanning, mapping

and inspections much more. The green light on commercial use for drones in the US will be the next big step in robotics applications, as more and more people will try to fit more and more technology onto drones, and depending on when that green light appears, someone is going to make some big breakthroughs for their industry.

Speaking of, every drone owner is looking for even a small breakthrough in one particular technology: Batteries. Battery life and capability is currently the weakest link in the drone world and anyone who can make even a 5% gain in either weight reduction or performance will be very popular, though I don't think we're going to see much this year unless Elon Musk decides to start a new company.