



8 Commercial Drone Predictions for 2018

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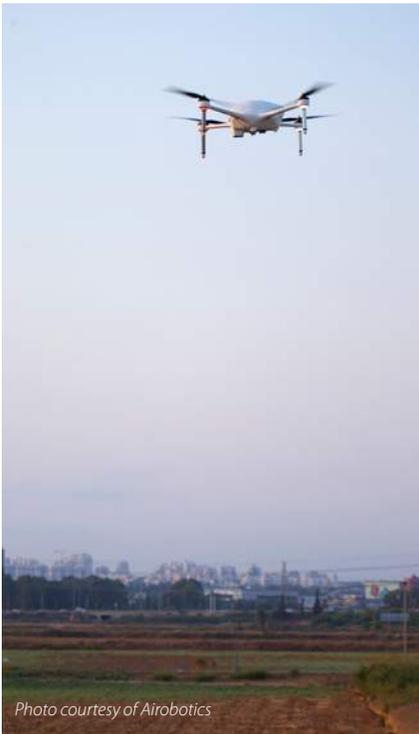
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When it comes to the future of the drone industry, the only real consensus around what's going to happen is that there is no consensus around what's going to happen. Firms from across the world continue to **churn out forecasts** that predict a bright future for UAVs in commercial applications of all types, but when and how we'll arrive at that future is much less agreed upon. Despite the uncertainty, it's a worthwhile endeavor to take a look at the landscape as a whole and try to figure out when certain developments are going to take place.

Our **predictions around what 2017 would bring** when it came to disputes with regulatory authority, a new focus on insurance and a slew of industry shake-outs were more accurate than not. There are arguments to be made on both sides around whether or not we truly saw the emergence of a worldwide drone market as well as a shift for organizations moving from "exploring" to "implementing" drone technology. Unfortunately, there was not tremendous progress when it came to changes in the public's reaction to the technology and major considerations around what it means to scale a program.

Regardless of how true or not any of those predictions were, we can safely say we'll see further developments for all of those topics in 2018. It's proof of just how unpredictable the industry has been and will continue to be, which is further demonstrated by the fact that we can talk about a whole new set of topics and developments that are set to play out in 2018.

1

We'll See Significant Growth in the Overall Drone Economy Which Will be Highlighted by an Expansion of LAANC in the United States and a Powerful Combination of Services, Regulation and Business Models Across the World

It's easy enough to say that the worldwide drone economy is going to grow in 2018, and that sort of prediction could easily have been made for 2017 and can already be made for 2019. However, there are specific areas of critical importance where we'll see growth in 2018, and they're the types of development that will open up opportunities in the United States and the rest of the world.

"In the United States, Low Altitude Authorization and Notification Capability (LAANC), will continue to expand and we will see it at airports nationwide by the end of 2018," said Ben Marcus from AirMap. "This means more and better commercial use cases for drones in areas like newsgathering, public safety, construction, and disaster response and recovery. We will also see the new UAS Integration Pilot Program start to come to life as states and cities partner with companies to deliver innovative drone uses."

As part of this **UAS Integration Pilot Program**, we should see package delivery authorizations start in 2018. In certain areas drone deliveries could become routine, although these developments will vary depending on the location they're being performed. The Integration Pilot Program is set to enable the biggest breakthrough for drones in the United States, but countries around the world will work to see airspace services, regulations and business models combined in an especially powerful way. This combination will enable tremendous growth in how operators from multiple sectors utilize the technology in locations around the world.

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– Ben Marcus,
AirMap

2 Data Will Drive Growth in Various Markets, but the Lessons and Opportunities in the Survey Space Will be Especially Significant

“In 2018 I expect to see surveyors starting to demand that their drone programs get them the deliverables they actually need.”



– **Daniel Katz,**
Aerotas

If we had to pinpoint the single biggest theme in the drone space in 2017, it would be about how the data is more important than the drone. It's a theme that was and is prevalent in various sectors, but the survey space will see the ramifications of this development in a specific way in 2018. Part of that will be driven by the uniquely lucrative opportunities that exist in this sector, but also by the fact that stakeholders are generally getting more sophisticated when it comes to their expectations of the kind of data this technology can capture and deliver.

“In 2018 I expect to see surveyors starting to demand that their drone programs get them the deliverables they actually need,” said Daniel Katz from Aerotas. “I have heard a lot of frustration among surveyors with drone companies trying to strong-arm them into believing that they should be happy with a pretty-looking 2D ortho-photo or 3D mesh model. Those are nice-to-have, but they're not what surveyors are responsible for getting their clients. This inclination to harangue customers for not being as cutting-edge as possible is a bad habit in new-technology industries in general, and many drone providers have been gratuitous offenders. I look forward to surveyors demanding that their drone providers get them what they actually need.”

Many surveyor firms get sucked into a rabbit hole of chasing tech-specs on ever-more impressive-seeming drones, only to spend too much money and time and finally deliver sub-par map accuracy. The secret is not in the drone, but how it's used. That's a secret driven by data which survey professionals will realize in a major way in 2018, but it's one that we'll see permeate other sectors as well.

3 Data Will be Used in the Inspection Space to to Prioritize and Predict Maintenance Activities at a Much Lower Operational Expense

“2018 will be more focused on automation of the data analysis and being able to bring inference on the huge data sets generated by the drones.”



– **Anil Nanduri,**
Intel

The opportunities drones will enable in the survey/geographic information system (GIS) sector in 2018 will be significant, but it's the inspection space that could be completely transformed. Drones have been used for inspection purposes for many years now to gather a vast amount of data about assets of various types and sizes, but the processes around utilizing that information often created a whole new set challenges. In 2018, simplified processes associated with the transition of “data” into “actionable information” will allow operators to spot issues before they turn into problems and totally reshape the approach that organizations take when it comes to identifying these issues.

“2018 will be more focused on automation of the data analysis and being able to bring inference on the huge data sets generated by the drones,” said Anil Nanduri from Intel. “While in the GIS space, it will be about accurate analysis of surveys, changes and progress monitoring during construction with actionable inferences, the inspection space is where the most value exists. Utility inspections (solar, wind, dams, towers and lines, etc.) are time consuming and expensive, and drone-captured data, with the right automated algorithms can help prioritize and predict maintenance activities at a much lower operational expense.”

Operators of all types have struggled when it comes to transitioning data into information that allows them to take action, and many of these challenges are related to the volume of data that drones can gather. Users simply could not sort through all this data manually. Breakthroughs in terms of automated data analysis that allow users to discover what action can and should be taken for a given asset will allow organizations to quantify the value associated with drone technology. Look for organizations to recognize how drones can make an inspection process more efficient in 2018 thanks to breakthroughs around predictive maintenance activities.



4 More Companies Will Pay More Attention to Data Security

“I definitely think that organizations of all sizes are going to start paying much more attention to data security.”



— Ian Smith,
DroneDeploy

Drone manufacturers of all sizes dealt with serious data security issues in 2017. Some of these issues were the result of the early days of drone data integration when there really weren't any providers who made it easy for an enterprise with high expectations to integrate. It's not an excuse that is going to work in 2018 though, as enterprise users have become painfully aware of what can happen if they don't take this issue seriously.

“I definitely think that organizations of all sizes are going to start paying much more attention to data security,” said Ian Smith from DroneDeploy and host of the Commercial Drones FM podcast. “The cloud is now pervasive in both personal lives and in business. Every device needs to be connected in order to realize the true value. As the drone industry providers themselves start to build and cater to enterprise needs, the companies who initially turned a blind eye—or just didn't escalate data security to as big of an issue as it is for larger companies—will start to adopt and adapt to the new industry standards.”

Enterprise users have seen what can happen when they aren't asking the right questions about their data. They aren't going to be making assumptions in 2018 like they might have in the past. Is the data they're capturing secure and encrypted? Are there audit logs available for their vast amount of users? Providers in the drone industry have and will continue to adapt to the stringent requirements from the enterprise users themselves in 2018. Those who don't should be seen as organizations that can't meet the needs of their customers.

5 Get Ready for HALE

“Besides the first wave of solar augmented small UAVs being introduced to the market in 2018, there are very interesting developments in the high altitude long endurance market segment (HALE).”



– Rich Kapusta,
Alta Devices

Being able to keep a drone in the air for longer periods of time has long been an issue for operators. We’ve seen improvements to battery capabilities, but the gains in this area have only provided minimal increases. However, innovations related to hydrogen power and solar energy are set to have a major impact on extending flight times. Solar technology has progressed to the point where the power generated versus the added weight is now sufficient to provide significant range extensions. However, these technologies could have an even bigger impact on a segment that’s set to come on in a big way in 2018.

“Besides the first wave of solar augmented small UAVs being introduced to the market in 2018, there are very interesting developments in the high altitude long endurance market (HALE) segment,” said Rich Kapusta from Alta Devices. “This includes drones, airships, and balloons. There are large corporations and startups investing significant dollars into this arena. The applications typically fall into two categories: connectivity and/or imaging. In 2018, I expect to see a number of prototype flights performed to further the development of this technology.”

There are examples of small fixed wing aircraft being able to fly for more than 11 hours with solar, and those are the types of improvements commercial operators will be looking to enable. Ensuring that drones remain in the air for a longer period of time will be a priority in 2018, and when hydrogen and solar innovations aren’t enough, the HALE segment will provide viable alternatives.

6 We’ll See a Breakthrough in Automation

“I predict that autonomous drones will see a breakthrough in 2018 date security.”



– Yahel Nov,
Airobotics

Automation for and with drones is not a new thing. Many recognize that when automation is done right, it can improve performance and open up new opportunities for operators and businesses as a whole. The prospect of a drone being able to perceive, reason and act in an environment is a technological challenge that various companies are focused on solving. 2018 is set to be a year when those challenges will be sorted out.

“I predict that autonomous drones will see a breakthrough in 2018,” said Yahel Nov from Airobotics. “Companies who regularly use drones for routine missions are now starting to feel the pain of the high costs associated with man-piloted drones, low level of accuracy, repeated equipment malfunctions and inconsistent availability of personnel. Companies who haven’t yet adopted regular drone use but are exploring the market are more likely to skip the manual operation and explore adopting automatic operations.”

The main industries that will see these adoptions happen are in mining, oil & gas, and homeland security, although regulatory considerations that vary by region will majorly impact how this process plays out. Regulation can only impact the development so much though, as technological advances in terms of how drones are able to automate a number of tasks will drive progress.



Photo Credit: Multivista Systems: www.multivista.com

7 A Number of UTM Initiatives Will be Launched and Become Operational in 2018

“Even though funds for the pilot program have not been announced, I guarantee you’re going to find five areas that are going to be awarded.”



– **Craig Marcinkowski**,
Gryphon Sensors

The push to create and enable a UAS traffic management (UTM) system is something that’s been in the works for many years now. 2017 saw some incredibly important developments for this system but 2018 is set to be even bigger. A **50-mile UTM corridor** enabling BVLOS flying is set to go online in 2018. NASA’s Technical Capability Level Three, which will include cooperative and uncooperative UAS tracking capabilities to ensure collective safety of manned and unmanned operations over moderately populated areas, is planned for January 2018. Suffice to say, UTM will be a reality in 2018 in a way it hasn’t in the past, but questions around funding always remain to potentially curb these kinds of developments. Luckily, we’ll see development on this front in 2018 as well.

“Even though funds for the pilot program have not been announced, I guarantee you’re going to find five areas that are going to be awarded,” said Craig Marcinkowski from Gryphon Sensors. “There will be investment and funding put behind that work. U-SAFE is a New York State funded program which helps accelerate the integration of drones into the National Airspace System, and they’ve put in a tremendous amount of funding to make that a reality. There’s a lot of work and investment flowing from a number of places.”

That investment is important, because it’s what will help ensure this UTM system becomes a reality. To unlock the true commercial benefits on a large scale, this kind of system will be a necessity to manage countless drones that will be flying simultaneously and guarantee operators can keep the airspace safe and secure. How that system will function and operate will take shape in a real way in 2018.

8 The Role of Counter Drone Technology Will Become Increasingly Important

“Counter drone technology can detect, localize, track and/or ‘interact’ with rogue drones in many ways.”



– **Kay Wackwitz,**
Drone Industry Insights

We’ve seen and talked about all the good that drones can do for many years now, but the potential harm these same devices could cause is a real concern. Consumer drones are cheap and modifications are easy to make. It’s not hard to envision scenarios where drones could be used to threaten the privacy of people, protected places, large events or specifically target critical infrastructure. It’s part of the reason people like the Director of the FBI have taken note of where and how counter drone technology will impact such concerns, and it’s a topic industry advocates see coming on in a big way in 2018.

“Counter drone technology can detect, localize, track and/or ‘interact’ with rogue drones in many ways,” said Kay Wackwitz from Drone Industry Insights. “This ranges from an alert to initiate safety measures all the way to the active defense of aerial threat. While the counter drone market is still a niche market, it already shows large contract volumes. Both governmental and commercial possibilities seem endless and we expect a similar rapid market development like we saw in the commercial drone market 2 years ago.”

That development will be heavily dependent on regulation, and in the short term, counter drone technology will likely only be used by governments. However, ‘softer’ solutions might soon be available for commercial use, and changes to regulation will enable these solutions to be adopted and help define this market. Startup companies that are focused on this technology will likely be focused on bringing in new ideas rather than dominating the space, since they’ll be competing against big and established companies that typically serve the military sector. Look for companies in the startup scene to find smart niches that will allow them to explore these ideas and influence how this market takes shape in 2018.



About the Author:

Jeremiah Karpowicz is the Executive Editor for Commercial UAV News. He has created articles, videos, newsletters, ebooks and plenty more for various communities as a contributor and editor. He is also the author of a number of industry specific reports that feature exclusive insights and information around how drones are being used in various markets. You can read all of those reports [here](#).



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