



7 Commercial Drone Predictions for 2017

By Jeremiah Karpowicz

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UAV Experts Talk Through the Important Developments the Industry is Likely to See for Commercial Drone Applications

MANY EXPERTS SAW THE 2016 ROLLOUT of Part 107 from the FAA as a watershed moment for the commercial drone industry as a whole. For a long time, organizations of all sizes stayed away from fully exploring UAV technology because of the hurdles and uncertainty associated with securing a Section 333 Exemption. Under Part 107 though, operators and organizations have a clear idea around how they can legally operate a drone for commercial purposes, and the threshold to do so has been considerably reduced. Part 107 might not have given commercial drone operators everything they wanted, but even the FAA’s harshest critics had to admit the rule provides the clear guidance and structure they had long been asking to see delivered.

Because of this development, 2017 is shaping up to be a critically important year. Professionals in oil & gas, construction, precision agriculture, process & utilities, mining & aggregates, law enforcement/emergency response/search & rescue as well as civil infrastructure are all looking at drone technology in a completely different light, but that doesn’t mean adoption is going to be a simple or easy task. There will also be challenges associated with sorting out what it means to secure proper insurance, changing public perception around commercial drone operations and what it means to scale a drone program.

Luckily, experts across the industry have insight around all of these items and plenty more. Their thoughts around what 2017 will mean to drone manufacturers, service providers, stakeholders and everyone else in the commercial UAV ecosystem provide an enlightening look at a year that could enable far-reaching growth and opportunity.

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“The drone industry must absolutely band together and make themselves heard at the local and state level. This must happen if the industry wants to drive its own future.”

#1 New Questions Around Legality and Authority Will Arise

MANY PEOPLE ASSUMED that Part 107 would resolve every legal challenge associated with operating a drone for commercial purposes, but that was never the real expectation or intention. Part 107 does not cover certain operations like flying beyond visual line of sight (BVLOS) or nighttime flying. Operators can go through a waiver process to receive approval around those kinds of operations, but that process in some ways represents a step backward. It’s something that Steve Hogan, Drone Lawyer at [Ausley & McMullen](#) as well as host of the [Drone Law Today](#) podcast, has already seen create challenges.

“The fact is that everyone and their brother wants to fly at night and BVLOS,” Hogan said. “Right now, each operator that wants to do something like that has to file a separate Part 107 waiver with the FAA. A rule that standardizes things for everyone will cut down on the waiver applications the FAA has to cull through, and will save agency resources.”

While many in the industry have shifted their focus to a rule that will create that kind of standardization, the FAA is not the only government entity that operators need to consider. The FAA has the authority to regulate all aspects of civil aviation, but the FAA only has authority to determine how drones can fly safely. What’s allowed to be done during an otherwise safe flight is in the jurisdiction of the states, and many states and even municipalities have begun to legislate accordingly.

Long before anyone knew what Part 107 was going to look like, Hogan mentioned that the drone industry needed to pay attention to what was happening at the state level across the nation, as the laws there could kill the drone industry. It’s an issue that will come into greater focus in 2017 since the hyper-focus on what the FAA is doing should dissipate.

“The drone industry must absolutely band together and make themselves heard at the local and state level,” Hogan emphasized. “That means taking things seriously and doing something instead of complaining amongst ourselves. This must happen if the industry wants to drive its own future.”

Operators and organizations have been focused on making sure they’re in compliance with FAA rulings, and doing so will remain essential. However, being involved in shaping, enacting and enforcing state and local drone regulation is going to be just as important going forward.



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#2 We’ll See a Transition from “Exploring” to “Implementing”

AS SOON AS DRONE TECHNOLOGY became readily available to consumers, professionals in many different industries wanted to leverage the technology. What surveyor wouldn’t want to easily be able to capture an entirely different perspective of a site? Similarly, project managers envisioned how drones could be able to impact critical tasks like change detection.

That enthusiasm was something Michael Singer, CEO at [DroneView Technologies](#), saw firsthand. Over the past few years he’s talked with hundreds of companies that were developing a curiosity around what drones could mean for them, and in many cases they even bought a drone to run some tests. The challenges they ran into centered on being able to derive value from them, which usually related to regulation and logistics. However, all of that has begun to change.



“What we’ve seen going into 2017 is that large companies have bought into and have validated with field tests the fact that drones actually do bring value to them,” Singer mentioned. “They want to make real commitments, and in doing so change their current workflow and behavior. If they were flying with a plane to do aerial acquisitions or walking with field crews and using GPS to do traditional survey, in certain use cases they’re replacing that with drones. The adoption cycle is now focused on implementing to workflow as opposed to R&D or exploring and getting comfortable with the validity of the data.”

The hype and excitement around drones being a “cool” solution was enough to get many professionals interested, but in the end it’s really all about what problems are being addressed and what problems are being solved. Does this new tool bring greater efficiency to the workflow and solve problems? That’s a question that no longer has an undefined answer, and it has created a transition that will begin to take shape in 2017. It’s not something that will happen instantaneously though.

“The transformation isn’t about waking up tomorrow and expecting that everything will be different,” Singer continued. “It’s going to be slow in that it’s not happening overnight, but quick in the sense that it will happen in a large way over the next couple of years. The alternatives are going to realign as needed. Some service providers will broaden their tool kit and provide these services, some will go away, some will be swallowed up. It’s a natural transition in terms of leveraging what a new technology can bring to an enterprise.”

How enterprises are or aren’t embracing this transition will be a major topic throughout 2017.

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#3 Insurance Will Become a Priority

CONCERNS ABOUT WHAT it means to operate a drone legally have been top of mind for commercial drone operators since the early days, but needs and requirements relating to insurance haven’t been as much of a priority. The reasons behind this are varied, but it’s safe to say recent regulation that defines what it means to legally operate a drone has changed the mindset for both operators and stakeholders. Motivations behind that change aren’t strictly related to regulation though.

“There has been a shift in mindset, but this has been primarily driven by the reality of operating a drone for a commercial endeavor,” said Chris Proudlove, Senior Vice President with [Global Aerospace](#). “The growth and scope of commercial use cases has led to greater awareness around risk factors and this, coupled with companies’ general risk management procedures, means that any commercial operator who wants to be able to fulfill a variety of commercial contracts needs proper insurance.”

What proper insurance looks like can sometimes be an open question though, and it’s complicated by distinctions between general liability (GL) carriers and specialist aviation insurance providers. Right now, many operators simply need to prove they have some sort of insurance to stakeholders, even though exactly what that means to either party is as best ill defined.

How policies deal with issues like privacy, damage and liability will change and become more sophisticated, especially as organizations establish requirements regarding insurance before they hire a service provider. It’s a change that’s already begun to happen.

“Companies that establish their own internal insurance requirements are becoming increasingly common,” Proudlove continued. “It’s standard practice for high end commercial operators to have to demonstrate significant limits of insurance to fulfill contracts. \$10m or even \$25m is not unheard of. We certainly see this type of requirement becoming more prevalent during 2017.”

A top priority in 2017 will revolve around sorting through the offerings of organizations like Global Aerospace that provide specialist aviation insurance with ones that offer drone on-demand insurance and even companies that provide a general liability policy that might not cover everything an operator thinks it does will become. Being able to identify what type of policy works best is something that will become a standard part of drone projects of every size.



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#4 A Worldwide Drone Market Will Begin to Take Shape

PART 107 MIGHT HAVE REDEFINED what it means to operate a drone for commercial purposes in the United States, but countries across the world are all at different stages in terms of how they're regulating drones. What it means to legally operate a drone in France is different than what it means to do that same thing in Germany, and while that complicates the issue, the interest in the technology is there. Companies like Sky Futures have operated in 23 different countries, which is just a hint at the sort of worldwide opportunities that are and will soon become available.

Some of those opportunities are related to whether or not entities like the European Union (EU) are able to create regulation that goes beyond the border of a single country, and progress is being made. Kay Wackwitz is the CEO & Founder of [Drone Industry Insights](#), a market research and analytics company based in Hamburg, Germany, and he has insight around how that process is shaping up, and also what it means for local regulation.

“The EASA (European Aviation Safety Agency) has planned to have the NPA (Notice of Proposed Amendment) done by the end of 2016,” said Wackwitz. “This NPA is then being commented on by all EU member states and subsequently reviewed by EASA until mid 2017. Based on these comments the EASA will form the ‘EASA opinion’ in early 2018, which will be the basis for the adoption of all the member states (2019). However, local regulations will also evolve during this time in the EU-member states and start to open the skies for certain modes of operation (e.g. BVLOS).”

Just as in the United States, the drone industry as a whole is moving forward while regulation details sort themselves out. The process itself will create opportunities for operators and organizations across the world that want to leverage the technology as the needs of so many different people working in so many different places are discussed and worked through.

“The drone space is a melting pot for technologies across all industries,” Wackwitz continued. “There is always a certain thrill to see the latest innovations and the game-changing opportunities that come along with it. We think drones are going to become much smarter and independent combined with a more specific design to fit a certain job. The one-fits-all solution will of course remain available to the recreational and prosumer market while commercial platforms mature and become part of the individual value-chain.”

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#5 Public Concerns Around What Professionals are Doing with Drones Will Begin to Dissipate

ONE OF THE BIGGEST CHALLENGES that first responders and even industrial operators have around being able to utilize drone technology does not relate to the tools themselves. Instead, they face public scrutiny as members of the public express concerns about their privacy when they see a drone flying near them or their home.

These concerns and fears will begin to dissipate in 2017, not just because of the public awareness campaigns that are designed to specifically address these concerns, but also because drones will be able to create and showcase so many more benefits. Jeri Donaldson is the CEO and owner of **FlyCam UAV**, a UAV systems integrator and builder and the US distributor for a UAV that carries sensors that detect radiological, biological and chemical threats. These are the sorts of capabilities that will help the public understand why seeing a drone in the sky should make them feel relieved, rather than threatened.

“While the general public still has its reservations about UAVs as a whole, I believe that once they see the benefits and life saving capabilities of UAVs they will have a more open mind about them,” said Donaldson. “As stories of their abilities to locate a stranded hiker or detect a radiation leak before it becomes critical become common place, the media will focus on the positives of UAVs which will help the general public become more accepting of them.”

That acceptance will come once members of the public understand that if a swimmer can't swim back to the beach because of a rip tide, a UAV could be flown out to the swimmer with a flotation device. A thermal camera mounted on a UAV can be used to find a skier trapped under the snow after an avalanche. These uses can resolve emergency situations in a far quicker manner, but not having to put additional lives at risk is just as important of a consideration.

“Whenever you can take the human element out of a potentially dangerous situation it's a positive,” Donaldson mentioned. “Before we started using UAVs to carry chemical and radiation detection sensors the job of checking for leaks fell on an individual or group of individuals to put on a hazmat suit and hand carry detection devices into the contamination area. Now radiation levels can be monitored or tested from a safe distance.”

There is no limit to the life-saving capabilities of UAVs, and as the public as a whole begins to understand this concept in 2017, more organizations and departments will be able to adapt the technology.



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#6 Organizations Will Consider What Scalability and Implementation Actually Mean

WE ALREADY MENTIONED the transition from “explore” to “implement” that we’ll see from organizations in 2017, but what will that implementation actually look like? It’s a question that doesn’t have a simple answer, because implementation for an organization that does business in multiple countries and sectors looks different than it does for a company focused on a single region and in a single market. Being able to sort through those kinds of details is something that David Boardman, Founder and CEO at [URC Ventures](#), sees happening in a major way in 2017.

“I think a lot of the drivers are going to be on the geographic scale of what you’re trying to accomplish,” Boardman explained. “If someone has a handful of high value mine sites, it’s going to be pretty easy to put a business case together to say that should stay internal and that competency should be built in-house. As you move to broader geographic scale though, that’s when suddenly the economics are going to be more challenging in terms of doing something in-house. Because then it’s a question of how many pilots you have, whether they can get to all the locations and fly at the frequency needed, etc.”

Seeing these questions asked and answered by stakeholders will lead to the implementation of different kinds of drone programs, which will likely mean we’ll see a number of highly visible scale-up efforts in 2017 within industries such as construction, aggregates and mining. These efforts will provide some leading indicators around how enterprises decide to scale their programs.

That might sound like a simple process, but there will be considerable challenges and arguments over the specifics, which will take place between stakeholders at different levels within an organization. It’s something Boardman has seen as companies have worked their way through the “experimentation” phase, and will become that much more pronounced with so much more on the line.

“The drone enthusiasts are going to run into the reality of the financial operations of the company,” Boardman said. “There are going to be some big clashes in 2017. The financial people are going to ask to see the measurable ROI. They’re going to want to see a scale-up plan. The cost to build the internal operation around that is going to be a significant investment for a company versus outsourcing that for a few thousand or even a few hundred dollars per job.”

Whether it makes sense for an organization to build their own drone program from scratch or utilize service providers without taking on the costs and risk associated with the former option will be a major point of discussion and contention throughout 2017.



Photo courtesy of URC Ventures

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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](#).

#7 There Will be a Slew of Industry Shake Outs

THE RECENT ACQUISITIONS, mergers, pivots, sales and partnerships that we’ve seen in the commercial drone industry are just a hint at what’s in store for hardware and software providers. These sorts of deals will increase in 2017 and further define what commercial drone solutions are available, and what features they possess. Such developments are partly related to consolidation for market share, but as ever, it’s mostly an issue of economics. It’s something that Chris Korody, Principal at [DroneBusiness.center](#), has looked at closely.

“The bottom line is that there are not many profitable companies in the drone space,” Korody said. “We know that VC investment is down and the F1000 tech company venture funds are for the most part only investing in small (\$1-5M) chunks. On the other hand, companies that already have VC investment will only sell for a significant multiple. I think the more likely scenario, and perhaps a trend, is for someone for whom drones are an adjunct rather than a core business to buy a particular technology and the team behind it to round out an offering or reduce time to market.”

Essentially, what Korody is talking about is a “complete drone solution”, and it’s one that professionals in every industry have been directly and indirectly asking to see developed. Simplicity is essential for operators of all types and sizes, which means the concept of being able to utilize a system that delivers them actionable information rather than data is what they’re all asking to see in one way or another.

The process to get there will see a number of companies fall to the wayside though. As a quick example, Korody mentioned that the UAV market can’t possibly support ten different LiDAR manufacturers. A few of the companies fighting for market share will become de facto standards and the rest will fail, which means that anyone making an investment in the technology needs to consider not only how that product will impact their project in the present, but also what the future of that company looks like. What’s the best way to approach such considerations though?

“The only real protection is to buy carefully and be very clear about where the ROI is going to come from for each individual investment,” Korody concluded.

The drone industry isn’t the first or last to leave certain innovators and stakeholders disappointed with how things shake out with the market. Luckily, those shake outs will help ensure the technology can be properly leveraged in 2017 and beyond, which makes paying attention to what that process looks like absolutely essential. ■



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Commercial UAV Expo is a conference and exhibition exclusively focused on the commercial drone market. Launched to great success in the US in 2015, the organizers are bringing their winning formula to Brussels with a European-centric event.

In the conference program, UAV industry experts share key insights into the issues large enterprise asset owners face when implementing UAS, including systems selection and integration; developing enterprise workflows, guidelines and policies; data management and integration; and legal, safety and regulatory considerations. Plenary sessions and panels cover topics of interest to all end-users regardless of industry while breakout sessions focus on UAV technology, applications and opportunities in the vertical markets listed above.

The international Exhibition includes airframe manufacturers, component suppliers, software suppliers and service companies.

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