



# How are Emergency Response & Search and Rescue Professionals Using Drones in 2017?

By Jeremiah Karpowicz

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**THE FORCE MULTIPLIER that UAVs represent for law enforcement, search and rescue and emergency response professionals can completely change the way these professionals approach a situation. If you had a square mile that you needed to search, a UAV could image that area in an hour, whereas it would take 100 searchers just as long to effectively clear that same amount of space. Similarly, firefighters can use a drone to assess what sorts of dangers exist in an environment before they need to enter it.**

Many have long recognized what kind of difference the technology represents, but regulation and the public’s reaction to officials utilizing the technology had prevented many administrations from fully leveraging or even exploring how drones could make an impact. Now that Part 107 has provided those same administrations with a path to utilizing the technology, governments can now use drones to do things like gather information, search for missing individuals or escaped convicts, surveil a hostage situation, and countless other things that would be far more difficult, costly and time-consuming without using drone technology.

Those uses speak to the overall advantages that drones create for professionals in this area, and it’s something Patrick Sherman is intimately familiar with. An internationally recognized expert in the drone community with the Roswell Flight Crew, he’s dedicated to the safe, beneficial and non-intrusive use of drone technology and has provided real-world demonstrations in public safety applications. He’s seen firsthand the kind of difference the technology represents.

“If I were to sum up the value that drones can bring to emergency response, I would use two words: ‘situational awareness,’ Sherman said. “For the most part, the general public doesn’t understand how much of the first responder’s mission is to simply gather and process information, in order to make good decisions about the emergency.”

Gathering information in a timely and concise manner can mean the difference between life

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“The public has to be educated as to how you’re going to use drones. Pilots need to be proficient, but they also need to know when and when not to use the asset. When they do use the asset, it needs to be in a structured and straightforward, already discussed, properly protocolled way.”

and death, and it’s something professionals in this space deal with on a daily basis. It’s why so many professionals immediately recognized the kind of beneficial impact drone technology could have, but also why they’ve been cautious around adoption. The stakes are high in this field, and they simply cannot afford to make mistakes. That fact is part of the reason why fully leveraging a UAV is about far more than the technology itself.

## Public Awareness and Privacy Concerns

WHILE PROFESSIONALS IN VARIOUS industries often have to deal with negative perceptions and reactions to drone technology from the public, emergency response & search and rescue professionals have to sort through these concerns on a whole different level. Many find themselves having to address citizens in venues like town hall meetings where parents express honest concerns about a certain department’s use of a drone to spy on their children, despite being unable to tie those concerns to anything that department actually is or wants to be doing with UAVs.

Addressing these concerns is about being proactive instead of reactive, and it’s something Gene Robinson knows in more ways than one. An early adopter of drone technology on the civilian side, he’s currently working with the team at Drone Pilots Inc. to develop standardized flight procedures and training programs to support unmanned aircraft operations for public safety/law enforcement/first responder use, all of which can only happen when the public understands and accepts how these tools are being utilized.

“The public has to be educated as to how you’re going to use these things,” said Gene Robinson. “That’s probably the biggest key. Pilots certainly need to be proficient, but they also need to know when and when not to use the asset. When they do use the asset, it needs to be in a structured and straightforward, already discussed, properly protocolled way. That sounds like a lot, but it can be done, and it can be done fairly quickly. It’s something we’ve proven.”

That sense of understanding goes for operators, stakeholders and the public, and it needs to be an active conversation on the part of everyone. How drones can and will be utilized can’t be a secret or something that suddenly happens. It needs to be addressed and assessed by people on all sides of the issue, and everyone should realize that drones aren’t going to be deployed in every single situation. That recognition and explanation can often mean the difference between a successful program and one that never gets off the ground.

Image courtesy of Roswell Flight Test Crew



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“The key for any public safety agency to successfully implement the use of drones, and especially law enforcement, is communication with the public at all levels,” said Sherman. “Go out and explain what you’re going to do with the drone. Demonstrate it at neighborhood functions. Have the media come out and do stories about it, and explain the value in terms of officer safety, in terms of clearing accident scenes more quickly, and so on. It’s going to be a long, time-consuming process – and the agency that fails to recognize that fact and fully engage with it is the agency that will have a failed drone program.”

Exactly when and how this conversation with the public needs to take place is a matter for individual departments to determine, but a policy of “early and often” is one that will be beneficial to everyone involved. The most successful government agencies with UAV programs reached out to the media and the community to inform them of what they were doing and why. They provided demonstrations of the aircraft and were open to questions and concerns from the community.

### Safety Program Logistics

PART 107 HAS REMOVED the complications and uncertainty that existed for emergency response & search and rescue professionals. However, it wasn’t regulation itself that often proved to be the biggest barrier for professionals, but instead the logistics associated with when and how they take to the sky.

“We’ve seen a lot of folks go out and take their 107 and they’ve started using them,” said Gene Robinson. “It’s a great thing, but the bigger issue is that we’ve run into many, many cases where public safety agencies have gotten going with drones without really understanding the requirements. Part 107 is great, but that test never addresses a department’s own operating procedures, and the environment they operate in is never addressed. So it’s very important to continue on with that education.”

Being able to set up an experience and proficiency-based training for any public safety agency that wants to start flying drones is something Gene Robinson is dedicated to, and for good reason. Part 107 is really just the beginning of the process to take to the sky, not the end of it. Establishing standards around what it means to properly and effectively utilize drones is an issue for operators across the country, and it’s one officials on various levels are sorting through.



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“Part 107 is the best friend in the world to all of those individual firefighters and police officers who see the potential of drones to help them do their work better, faster and safer than ever before, even as they fight the bureaucratic inertia of their own organization and leadership.”

Justin Robinson (no relation to Gene) is the UAS Coordinator for the City of Murfreesboro, TN. He’s experienced what it means to work through logistical and regulatory challenges, and how that process has impacted the way they’ve been able to move forward with the technology.

“I would say regulation was one of the major obstacles that acted as a deterrent for government agencies when it came to implementing sUAS programs,” said Justin Robinson. “However, it definitely wasn’t the only factor. The youth of the sUAS field combined with budgetary restrictions also served as a concerning factor. Convincing a city or county to put money and effort into an, at the time, relatively unproven technology was very difficult. Throw in the arduous process of obtaining an FAA Certificate of Authorization and more often than not that would be enough to derail most discussions about implementation. However, since Part 107 went into effect, I have been contacted by several municipalities that now want to seriously look at the potential for creating their own sUAS department.”

Part 107 and an active attempt to educate the public have allowed various departments to produce results with drones, but successfully implementing UAVs requires a transition that goes beyond individual use cases.

### Effectively Fighting Bureaucratic Inertia

FIREFIGHTERS AND FIRST RESPONDERS might influence a department’s approach to drone adoption, but decision makers often reside within the top levels of the department, or even at the city council level. That can often mean a discussion with stakeholders who are not inclined to make a significant investment in a new technology, even when the benefits are obvious. However, there has never been a better time to make those benefits unable to avoid.

“Part 107 is the best friend in the world to all of those individual firefighters and police officers who see the potential of drones to help them do their work better, faster and safer than ever before, even as they fight the bureaucratic inertia of their own organization and leadership,” said Sherman. “Drone operations are now a ‘regular’ and ‘ordinary’ part of the broader aviation



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industry – just like the manned aircraft public safety officials have been using for decades – which is a lot less intimidating for administrators than seeking a waiver from the FAA to use this newfangled technology.”

The transition Sherman is speaking of is a significant one, as drones have for a long while been considered to be something inherently new and different. Part 107 has helped them to transition to being considered just another tool for emergency response professionals to utilize when appropriate. This transition is critical, as it will allow any operator who sees what kind of difference the technology can make to have a very different conversation with stakeholders, regardless of what level those stakeholders reside.

“I would suggest and encourage public safety employees to speak with their superiors about the great potential impact sUAS can have on how they do their jobs in terms of eliminating personnel risk,” said Justin Robinson. “However, it is very important to stress that any drone implementation be taken with a serious regard to existing state laws, safety, and respect for the privacy of their citizens.”

The framing of the conversation around how drones can and should be utilized and leveraged is critical, as Part 107 and FAA regulation are not the only things that need to be considered. Different states and even different cities restrict how anyone can fly a drone, and the public’s reaction to those endeavors cannot be ignored. Being able to do so is a more defined process than ever though, and that leaves drone advocates in an incredible position when it comes to adoption of this technology. Now the question is when and how officials and administrators will work to take advantage of those opportunities. ■



#### 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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## About Commercial UAV Expo

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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