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Seven Ways To Choose The Best Contractor For UAV Surveillance And Data Analysis



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Many people want to find out how unmanned aerial vehicle (UAV), or drone, surveillance can benefit their business, but they don't know where to start. This new technology can cut costs and improve efficiency, but this only works in conjunction with competent contractors. This checklist will help you select specialists whose work you certainly won't have to repeat.

1. Ask Your Analyst About The Benefits

Perhaps you've only recently become interested in UAV aerial filming and don't yet know its capabilities. For example, let's say you service industrial factories or grow corn. Initially, it may seem that in the first scenario, drones would only help identify

severe damage to support structures and transformers, and in the second, drones could only help you identify dry areas in a field. But the technology's potential is far broader.

Having examined building structures, you will be able to detect even minimal defects and track their dynamics. And based on aerial field surveillance, you can draw up a map displaying the density and uniformity of seedlings, their growth rate, the color of shoots, the presence of pests and more.

Drones can offer more than you initially expect. Don't hesitate to ask an expert about the data that can be obtained based on your specific requirements. Be sure to describe any tasks and issues you might have in detail to make sure your requirements are fully understood.

2. Determine How Good The Company Is At Data Analytics

If you don't have a personal drone fleet, you will most likely have to work with two contractors: one will do the filming, and the other will process the results. The main challenge is that drone operators do not always understand how and what to shoot.

Perhaps these teams focus on entertainment services; they might have professional drones with a number of cameras and sensors, but they don't use them. Wedding videos don't need LiDAR and infrared sensors. You, however, definitely need this technology.

A professional analyst knows what data is needed and what will inform the operator accordingly: at which altitude to fly, at which angle to shoot, which cameras and sensors to use, etc.

Of course, many providers handle both the shooting stage and the processing of the received data. Pay attention to the company's experience in working with data because shooting a field, a construction site or an oil pipeline is easier than extracting valuable information for business processes from this data.

Consulting with a data analyst will help you decide whether you need your own data processing department or if you can outsource processing.

3. For Complex Projects, Choose A Contractor With Experience In Complementary Areas

If your project involves non-standard flight routes, works in conditions with limited visibility and receives information from sensors, it will require more than just UAV shooting. As a rule, AI and IoT technologies are used to fulfill such tasks.

So, with the help of artificial intelligence, it is possible to build "smart" drone routes outside the operator's line of sight, recognize objects and create predictive models for the development of a targeted metric. IoT sensors allow you to refine the information collected by drones and, importantly, receive consistent data from the surveyed objects, regardless of the flight frequency.

In addition to using the technologies mentioned above, an ideal contractor should have experience integrating survey results into corporate systems and working with satellite data. Expertise in working with specific spatial geo-tools and methodologies is another realm.

4. Order The Development Of A Flight Plan

You can find flight program templates on the internet, but they are only suitable for the simplest of tasks, such as measuring flat areas. The next level involves creating a flight mission using a ready-made software package, but here you are limited by the software's capabilities. For complex atypical tasks, it's worth writing your own programs, which should include flight plans.

By improving the software for your tasks, you can maximize the capabilities of drones while also saving money on unnecessary functions. In most cases, the software should manage the work. A human can miss sections or make mistakes in the settings. For example, battery capacity is generally not sufficient for an entire route, so a drone has to return to the base for it to be replaced. The flight route must be programmed so that the battery life is sufficient for the return trip. A human being can make mistakes with this — preprogrammed technology cannot.

5. Find Out If The Contractor Can Track Change Dynamics And Give A Development Forecast

To track the processes over time, you need to carry out surveys regularly and compare results. A competent contractor knows how often they need to shoot the objects and analyze data received at different times. Then, they'll be able to provide an estimate based on the existing dynamics and tolerance standards.

The information above is essential: It's much cheaper to detect and prevent problems in advance than it is to eliminate their consequences. This is especially important for projects that require uninterrupted supplies and no downtime.

6. Request The Results In A Convenient Format

Imagine you have thousands of files, tables and databases. You'll have to scour through all of this for the necessary images, compare them and then create charts and maps. There is no point in investing in UAV filming and then doing the rest of the work manually. When there's a lot of data, it's convenient to manage it through a web portal or software, where everything is organized and visualized in an orderly fashion.

7. Embed UAV Survey Results Into Business Processes

UAV surveillance results need to be integrated into business processes so that the information collected is valid and useful. Most likely, you won't be able to do all this integration yourself, even if you have your own IT department. This will require an entire infrastructure of powerful servers, software, specialists in databases, machine learning and more.

With these points in mind, you should be well on your way to vetting the right UAV surveillance and data analytics contractor or contractors for your organization.



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Boris Kontsevoi is a founder and President of [Intetics Inc.](#), a leading global software engineering and digital transformation company. Under his leadership, a group of software engineers developed into a truly global technology company with multiple professional certifications and industry awards, including the Global Outsourcing 100, Software 500, and Global Sourcing Association best of class company.

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