



The construction industry has embraced the use of drone technology to make their processes quicker and easier. Here are five helpful tips to consider when picking the right drone for the right project, as the team from Microdrones explains.



Drones: tools,

Mike Dziok, marketing director for Microdrones was interviewed by Sean Heath from the MarketScale Electronics and Software podcast. They discussed the role of drone technology in geomatics and construction and how Microdrones has established a strong partnership for distribution.

Sean Heath (SH): Your company has taken a toy and repurposed it to be one of the most important advancements in the industry. Tell me a little bit about some of the things that you do with drones?

Mike Dziok (MD): The work that's being done with drones in terms of photogrammetry, geomatics and surveying has been done for the past thirty years. It just wasn't done with drones but rather manned aircraft, and by foot on the ground. Drones fill the space where ground work can be done more efficiently with an unmanned aerial vehicle.

When you mention toy, we cringe at that. We are not in the toy segment. We have commercial grade aircraft that stand up to wind, rain, and weather. From the very beginning these systems are professional grade and they withstand the rigors and abuse of daily field use.

As you might imagine, a manned aircraft that's mapping a large section of land costs a lot of money to fly, insure, and fuel. An unmanned aerial vehicle is much more cost-efficient. We are not in competition with traditional aircraft that are doing mapping and photogrammetry. We're really complementary. If a piece of land is smaller, it makes sense to use an unmanned aerial vehicle.

SH: You've expanded the base of customers that can now utilise this technology. You've given them the ability to become really granular in the way they go about getting information that's needed for a project.

MD: Yes. Sometimes we hear, "Wow. You're taking away jobs from surveyors." That's not the case at all. We still need professionals from the geomatics and aviation trades involved in these projects. It's just that more work can be done more efficiently and to a greater degree of accuracy and safety.

SH: Tell me more about the complete solutions that you've come up with.

MD: We have three main product offerings. We have our mdMapper lineup which is best suited for aerial photogrammetry. We have our mdTector series – the first system is called mdTector1000CH4. Then our newest release is mdLiDAR1000. We're really selling a whole package: the drone, the sensors, the software and the workflow, plus the training and the support that goes into making this a fully integrated package for professional users out in the field.

We break that down in all our materials as: plan, fly, process and visualise. So the planning is done via our tablet software called mdcockpit tablet. Then you fly the mission, collect the information, land, and download the data via Bluetooth. Once processed, you have a visual. That visual is different depending on what the application is.

For our mdMapper, the output is typically an orthomosaic, a collection of hundreds of photos, taken with a very high resolution sensor, to create one giant image.

For our mdTector, our methane gas detection system, the output is essentially a map showing your methane hotspots. That shows where problems are along a pipeline or gas infrastructure.

Last, but not least, is our new LIDAR lineup of products, where the output is a pointcloud. This enables someone who is developing a piece of land to figure out where they need to level or raise it. If it's irrigation, they can detect where they may have water problems and where they need to address that.

SH: You mentioned earlier that these drone based solutions are an addition to the tools



Alex Lowry, Drone Operator for Brent Scarbrough & Company flies an mdMapper1000DG system from Microdrones 2-3 times each week, to efficiently capture data from construction sites and generate topos.



Paul Shepard, UAS support specialist at Sitech South, helps customers implement new technology from Microdrones throughout the southeast United States.

Interested in how fully integrated drone packages might be helpful for your business? Visit lp.microdrones.com/ic to talk with an expert

not toys

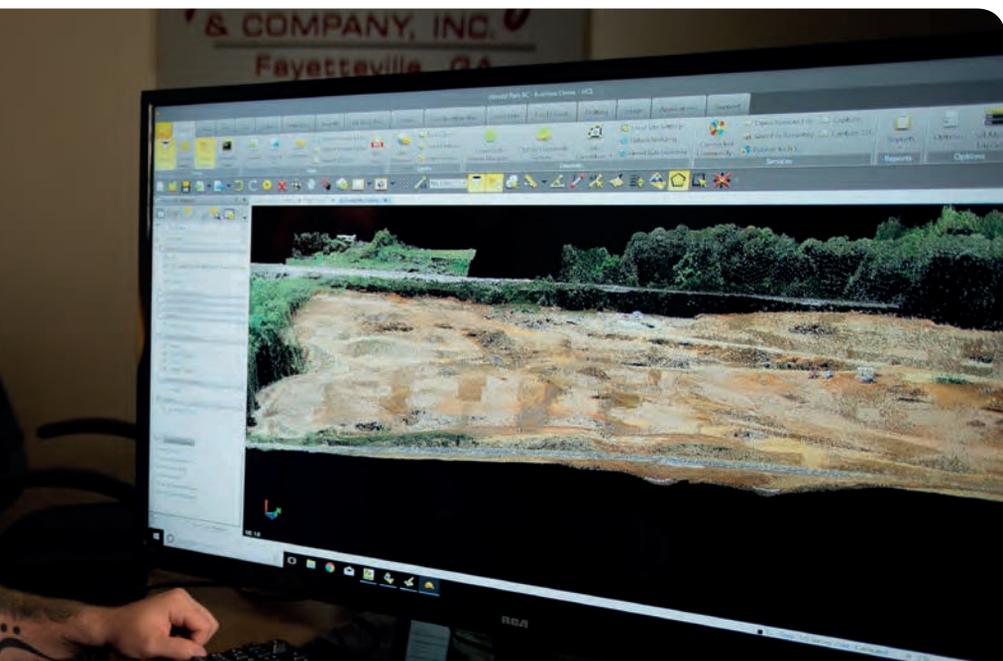
that surveyors already use, and that the mdLiDAR1000, the mdMapper1000DG actually have a Trimble-powered component. Where do you see that partnership helping the industry move to the future?

MD: I'm glad that you bring that up, because some of our products have Applanix components inside. Applanix is a Trimble company and their APX-15 is actually a critical component within our mdMapper1000DG and our mdLiDAR1000 systems. Direct georeferencing is very important, because it allows for more efficient mapping of an area with a high degree of accuracy. You don't have to set as many ground control points or, in some cases, you don't have to set any ground control points at all. You save time post processing.

SH: I now understand why you call the product lineup mdSolutions. I ignorantly said, "You guys do drones!" But that's just a small fraction, you are actually a solutions company.

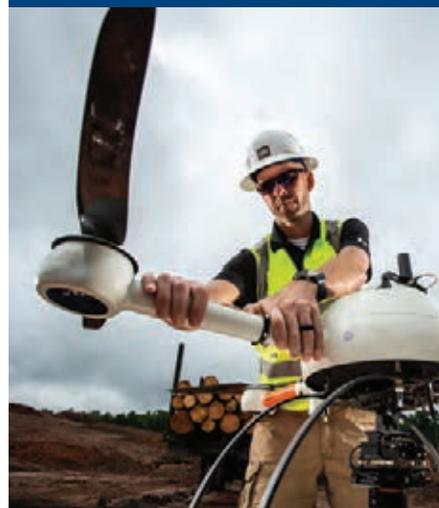
MD: The name of our company is Microdrones and for obvious reasons people talk about drones, drones, drones. We are anything but just a drone company. Instead, we're solving very niche problems for established professionals.

Where we see Microdrones long-term, is that before heavy equipment starts moving dirt, our systems have flown to help collect data that is then used to make decisions about where that dirt should be moved, where structures should be placed and how projects should be tracked. That's really where we see our company and how we've aligned ourselves with the absolute best in the industry.



microdrones®

JOB SITE DURABILITY. PROFESSIONAL RESULTS.



The mdMapper1000DG from Microdrones combines our robust, weather resistant UAV with a fully integrated photogrammetry direct georeferencing system. You can avoid installing ground control points (unless you want to install 1 or 2 to check your work for quality control). Collect your images and post-process them in a fraction of the time, following an end-to-end software workflow. Sound interesting?

Complete this easy online form to start a conversation with us: lp.microdrones.com/ic



SITECH

SITECH South is proud to offer complete UAV packages from Microdrones that include everything construction professionals need for surveying, mapping, and other aerial applications.