

# Drone industry aims for takeoff in Maryland

By: [Tim Curtis](#) Daily Record Business Writer August 2, 2019

---



Airgility's DS-1 model, considered ideal for search and rescue operations. (Submitted photo)

In April a drone carried a kidney across Baltimore to the University of Maryland Medical Center, where a patient who had waited eight years on dialysis received the organ.

It was a successful test of one program that hopes to use unmanned aerial systems to improve the efficiency of the organ transplant system, but for many the test just scratched the surface of what they hope a Maryland-based drone industry can do.

An increase in unmanned flight has the potential to be an industry-altering change, akin to the move from propeller engines to jet engines, said Matt Scassero, director of the University of Maryland Unmanned Aircraft Systems Test Site.

"This is that kind of transformation for the aerospace industry, but even larger for transportation, infrastructure," he said. "It is going to be huge."

Much of that growth could happen in southern Maryland, where a confluence of factors makes the region and the state a potential hub for the industry.

The University of Maryland Unmanned Aircraft Systems test site, located in California in St. Mary's County, is an operational research test site, evaluating the technology, procedures and applications.

"We get the drones airborne is the bottom line," Scassero said.

The site has four elements of its core mission: conducting flight research, supplementing the higher education program in College Park, engaging in public conversations about drones and spurring economic development.

“How do we position southern Maryland specifically ... to make sure that unmanned aircraft systems are ushered in from the defense work that we have been doing with the military,” Scassero said. “I’m into a lot of it.”

### **A growing industry**

A 2016 report by the Maryland Department of Commerce described the potential scope of the industry. The market for smaller commercial-focused drones was expected to grow to up to \$80 billion by 2025, the report said.

Several different industries could become important consumers for unmanned air systems, including agriculture, infrastructure and law enforcement.

Infrastructure in particular has been a strong area, where drones can be used in construction, surveying and inspection of power lines and pipelines.

“What we have discovered is the even larger opportunity and really the low-hanging fruit area has been in the infrastructure area,” Scassero said.

Some challenges will have to be met to grow into that \$80 billion industry.

Regulations are still strict. Most of the test flights right now are about proving to federal regulators, including the Federal Aviation Administration, that flights can be conducted safely.

Wing, a drone delivery company owned by Google’s parent company, Alphabet, received the first commercial license this spring.

The tight regulations have pushed some companies, including Wing, to other countries where regulations are more lax.

Cybersecurity concerns are another challenge. Companies need to make sure that their equipment can not be interfered with, jammed or taken over by another actor.

“It’s really a critical piece because the drones are nothing more than laptops with wings,” Scassero said.

### **A proven model**

Maryland’s existing cybersecurity and health care industries should be models for how an unmanned aircraft industry could grow in the state. Both industries have sprung up around existing assets.

In health care that includes Johns Hopkins Hospital, University of Maryland Medical Center and the National Institutes of Health. Cybersecurity has become an industry because of the presence of the National Security Agency and U.S. Cyber Command.

Similarly, Scassero envisions an autonomous pipeline centered around a couple of military installations in the state. In both industries, the state’s universities have helped provide the skilled workforce needed to grow.

“Today, all you have to have is people. That’s really the driver of where industry gets located and where things get accomplished,” he said. “The people that do unmanned aviation are already here in southern Maryland doing that work for the government.”

Military assets in the region include Naval Air Station Patuxent River and the Aberdeen Proving Ground. Launch sites include the University of Maryland site in St. Mary’s County and the Eastern Shore’s Crisfield Municipal Airport.

Talent also comes from engineering schools at the University of Maryland, College Park; University of Maryland, Baltimore County; and Johns Hopkins University.

Some large companies in Maryland are also significant players, including Northrop Grumman and Lockheed Martin.

## **Competition**

But Maryland is not the only state that hopes to have a foothold in the growing drone industry.

To the south, Virginia has made its own play in the space, including a significant center at Virginia Tech. Wing, the drone-based delivery company owned by Google parent company Alphabet, is conducting tests in southwest Virginia, near the university.

California, as it is with most tech-related industries, is the leader in the industry. Austin, Texas, has become another powerhouse tech area.

New York and North Dakota also want to attract the drone industry. Both have their own FAA-designated test sites and New York offers self-described aggressive incentives for companies to locate in the central part of the state.

Pramod Raheja, CEO of Airgility, a startup based in College Park licensing University of Maryland technology, believes the biggest thing holding back Maryland companies is access to capital.

“For us, a company like ours and I would argue many other drone companies that are in the (business-to-business) and (business-to-government) space, I would say there’s no reason to leave,” he said. “I think if the capital funding environment were better it would just be ‘Silicon East.’ ”

Access to capital can have important consequences for a growing startup.

“I am very intern heavy, being so closely affiliated with the university,” said Evandro Valente, Airgility’s chief technology officer. “I’ve been managing to luck out exceptional talent to come work for me.”

But without capital, Airgility has had a number of interns move on to jobs with companies like Space X, Raytheon, Boeing, GE and Johns Hopkins Advanced Physics Lab.

Raheja also believes companies in the larger Maryland-Virginia-Washington region would have a greater opportunity if the states worked together. Airgility has received funding from Maryland’s TEDCO and the Maryland Momentum Fund along with economic development groups in Virginia.

“We look at the whole DMV as one big area,” he said. “If the region was able to say, hey lets together as a region make us leaders in technology and drones and other things, I think there could be so much more power.”

Both states and New Jersey used to be a part of the Mid Atlantic Aviation Partnership, but that agreement expired Dec. 2016.

**Correction:** A previous version of this story said Maryland was part of the Mid Atlantic Aviation Partnership with New Jersey and Virginia. That agreement expired Dec. 2016.