Unmanned aircraft market could boom in transition to civilian use

By John Hageman


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GRAND FORKS, N.D. - In Terry Sando's National Guard career, he has seen how unmanned aircraft systems can be an asset in surveillance and rescue operations.

But when asked about the future of Grand Forks' UAS industry, Sando talks extensively about its possible applications in the commercial sector. Sando, who was hired last month as the Grand Forks Region Economic Development Corp.'s UAS sector senior manager, expects much of the industry's growth to come from uses by farmers and law enforcement.

North Dakota's push to become a national hub for the UAS industry is partially led by those with a military background, like Sando. But they say that the technology that emerged for military and defense purposes has a bright future in the commercial sector.

"Like many technologies, they start out in the military first," said Robert Becklund, the executive director of the Northern Plains Unmanned Systems Authority. "And then they transition and find opportunities in the civilian market."

"Unmanned aircraft are no different."

Testing the airspace

Al Palmer, director of UND's Center for UAS Research, Education and Training, said use of unmanned craft for precision agriculture to gather data on crops and by energy companies to survey pipelines and other facilities will increase in the coming years.

Palmer said UAS's future could be analogous to traditional airplanes, which he said were first widely used in warfare during World War I. Afterward, their commercial use greatly expanded.

"Now we don't think anything of getting on an airplane and flying halfway around the world," Palmer said. Common consumer goods like global positioning systems have their roots in the military.

Ben Gielow, government relations manager for the Association for Unmanned Vehicle Systems International, said U.S. Department of Defense's massive investments in research and development make it a great incubator for new technology.

"Technology has gotten to the point that the civil and commercial industry can take advantage of the work that has been done," he said. "I think that unmanned aircraft will follow the same path that GPS followed, that the Internet followed."

The major obstacle in the way of UAS making a similar transition is the Federal Aviation Administration's restrictions on their use in the national airspace, Palmer said. But that's expected to change by 2015, which Congress has mandated as a deadline for integrating unmanned aircraft safely into the airspace.

"It's a very effective weapon system that the military uses, but it's really going to grow when we commercialize it," Palmer said. "And that's the process that we're going through right now."

Before 2015, the FAA will designate six test sites for integrating UAS. Twenty-four states, including North Dakota, have applied for that designation, and an announcement could come by the end of the year.

During the testing period, Becklund said, policies and regulations regarding the use of UAS will be developed before their full integration. Becklund, the former commander of the North Dakota National Guard's 119th Fighter Wing, said the FAA's challenge will be making sure UAS don't endanger traditional craft.

Should North Dakota be named one of those test sites, a proposed business and technology park at the Grand Forks Air Force Base would stand to benefit.

Much of Sando's focus will be on the Grand Sky business park, which will be a hub of activity surrounding UAS research and development.

The U.S. Air Force recently announced it intends to sign a lease with Grand Forks County to provide 217 acres for the park. Grand Sky's private developer could be named next week. Sando and the EDC will work directly with that developer to help attract UAS companies and research entities here.

Sando has worked in operations in which UAS were used for gathering intelligence on drug cartels in Central and South America. He also was involved in operations to find the biggest areas of destruction along the Gulf Coast after Hurricane Katrina in 2005.

He said UAS will have a future in law enforcement in rescue operations, but in the commercial sector as well.

"The (remotely-piloted aircraft) and UAS were developed in a military-type of role," Sando said. "Once we see the FAA go through (with UAS integration), you'll see it just explode."

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