



Dow Jones Reprints: This copy is for your personal, non-commercial use only. To order presentation-ready copies for distribution to your colleagues, clients or customers, use the Order Reprints tool at the bottom of any article or visit www.djreprints.com

..... See a sample reprint in PDF format Order a reprint of this article now

THE WALL STREET JOURNAL.

WSJ.com

• BUSINESS

| • AUGUST 24, 2009

Makers of Military Drones Take Off

By [AUGUST COLE](#)

Unmanned U.S. aircraft have not only transformed the battlefields in Iraq and Afghanistan, but now are altering the defense-industry landscape, as well.

The White House's defense-budget request for fiscal 2010 includes approximately \$3.5 billion for unmanned aerial vehicles.

As demand grows, the Pentagon increasingly is relying on smaller suppliers that have developed the relatively inexpensive and effective weapons systems.

Companies such as General Atomics Aeronautical Systems Inc., the maker of Predator drones, hope to hold their edge over established, deep-pocketed contractors in what has become one of the military's most critical technologies.

They also hope to become more established within the defense industry as Defense Secretary Robert Gates pushes the Pentagon and contractors to furnish troops with better intelligence and real-time surveillance.

Unmanned aerial vehicles are smaller and have less-extensive electronics systems than piloted military aircraft and don't require as much fuel, big runways or major logistics support. UAV pilots also don't require as much training as fighter jocks.

That lowers purchase and operating costs, as well as the risk to personnel. But for many missions, such as keeping enemy aircraft at bay, today's UAVs still are no match for a manned fighter.

In Afghanistan, unmanned aerial vehicles routinely provide high-quality images that were previously available only from satellites or highflying spy planes. Demand has increased in particular for General Atomics' biggest armed UAVs that not only can track targets, but can attack them as well.

According to Pentagon documents, about \$1.3 billion in the 2010 budget is intended to buy the Predator's better-armed successors, the Reaper and the Sky Warrior. That is enough to purchase 60 of the General Atomics aircraft for the Air Force and the Army.

By contrast, the Pentagon is seeking \$10.43 billion to buy 30 of the military's next-generation F-35 Lightning II fighter jet, which is still in development under a program led by [Lockheed Martin Corp.](#)

The largest defense contractors mostly have struggled to produce comparable combat-ready UAV technology and have turned to partnerships with and acquisitions of smaller companies.

The UAV industry, which hasn't undergone the consolidation that has occurred in the mainstream defense industry, "is like the aeronautical industry around World War II," said Steven Sliwa, the president and chief executive of Insitu, a maker of unmanned aircraft that [Boeing Co.](#) acquired last year.

Lockheed Martin, the Pentagon's biggest contractor by sales, recently tapped General Atomics to supply the defense giant with Reaper aircraft for a Navy contract. [Northrop Grumman Corp.](#) won the bidding, however.

Northrop is an exception among major defense contractors developing UAVs, with its Global Hawk, a high-altitude aircraft with a wingspan as wide as that of a jetliner.

And Boeing in June created an unmanned-airborne-systems division that includes Insitu, but the drone maker maintains a fair amount of independence. At a recent trade show in Washington, Insitu's booth was separate from the Boeing area, and Insitu executives' business cards don't feature Boeing logos.

General Atomics' Reaper, which costs between \$10 million and \$12 million apiece, and the smaller Predator for now are tackling the U.S. government's most sensitive missions.

Armed UAVs have enabled the U.S. to conduct airstrikes against Taliban and al Qaeda fighters, some inside Pakistan, without endangering U.S. pilots. U.S. officials have said the leader of Pakistan's Taliban was recently killed by one such strike.

UAV attacks have been subject to Pakistani criticism, however, because of civilian casualties and alleged violations of sovereignty.

Mr. Gates and senior lawmakers -- who say the Pentagon has moved too slowly in providing equipment and technological capabilities to troops in combat -- have created well-funded initiatives to urgently field new systems such as UAVs.

The military's most successful weapons in recent years, including the Global Hawk and the Predator, as well as a remote-controlled ground vehicle from iRobot Corp. called the PackBot, haven't come out of the Pentagon's traditional weapons-buying system, said Peter Singer, director of the 21st Century Defense Initiative at the Brookings Institution. The big players are "facing some major issues as homes of innovation," he said.

In a corner of the defense industry populated with small firms, General Atomics stands out. Thomas Cassidy Jr., president of the General Atomics unit making Reapers, expects the Air Force to buy as many as 375 of the drones.

The company developed the Reaper from its basic Predator model, itself a 1990s system bought by the military outside traditional weapons-procurement channels.

General Atomics, which is based in San Diego, also is at work on a faster, stealthy UAV that will avoid enemy radar in a way its predecessors can't. "It can go where Reapers and Predators can't go," Mr. Cassidy said.

Insitu's specialty, meanwhile, is surveillance. Its technology initially was used by commercial fisherman to track schools of tuna. But after the Sept. 11, 2001, terror attacks, Insitu focused more on defense.

The Marines took its systems to Iraq in 2004, where Insitu's UAVs helped watch over U.S. forces fighting in Fallujah.

Insitu is working on a plane called the Integrator, which it hopes will win a Navy contract for surveillance aircraft. Bigger firms, among them Raytheon Co., are pursuing the contract.

The Integrator carries more electronics than its smaller predecessor, the Scan Eagle, which has notched some 200,000 flight hours, according to the company.

Write to August Cole at august.cole@dowjones.com

Copyright 2009 Dow Jones & Company, Inc. All Rights Reserved

This copy is for your personal, non-commercial use only. Distribution and use of this material are governed by our [Subscriber Agreement](#) and by copyright law. For non-personal use or to order multiple copies, please contact Dow Jones Reprints at 1-800-843-0008 or visit www.djreprints.com