Boeing to Develop New X-45C UCAV for Air Force and Navy Demonstrations

The Boeing Company [NYSE: BA] announced today that the Defense Advanced Research Projects Agency (DARPA) has asked it to modify its current X-45B Unmanned Combat Air Vehicle (UCAV) design to cost effectively meet both the Air Force's evolving need for greater range and loiter capability and the Navy's objectives in their DARPA-led UCAV-N demonstration program.

The DARPA decision reflects the realization that Boeing's X-45B design for the Air Force (a larger, more capable version of the current X-45A) could be further evolved into a system capable of meeting the objectives of both services. Boeing is proposing that their modified concept be called the X-45C.

"An important objective of spiral development is to meet the evolving needs of war fighters much more quickly than we have in the past," said Darryl Davis, UCAV program director for the Boeing Phantom Works. "Recent conflicts have indicated a need for greater range and persistence over the battlefield than originally planned, and we were able to quickly respond to our customer's needs."

The DARPA/USAF/Boeing UCAV program is pioneering the DoD's new spiral development process, which allows for the introduction of changes in a concept under development to better meet evolving customer needs. Under Spiral 0 development, the Boeing Phantom Works has already built and is currently demonstrating the X-45A UCAV system. The current UCAV Spiral 1 agreement, under which Boeing was developing the X-45B, has been modified to replace the X-45B concept with the X-45C concept.

Under this modification, the X-45C also becomes Boeing's solution for UCAV-N demonstrations. Boeing Phantom Works has been involved in the concept definition phase of the UCAV-N program since it inception in July 2000.

"We will be able to leverage the lessons we've learned from the X-45A demonstration program and a significant amount of our X-45B design effort into the new X-45C concept," Davis said. "This will allow us to more quickly and affordably provide both the Air Force and Navy with more robust, capable and operationally representative concepts than would have been possible under our previously separate development programs."

The X-45C Air Force design will be based on the subsystems and center body of Boeing's current X-45B design, but it will incorporate a revised planform that carries more fuel and provides better aerodynamic performance.

With its increased fuel volume, the X-45C will have a combat radius more than three times the X-45B carrying the same payload. Efforts to incorporate air-refueling capabilities under the Air Force's Automated Aerial Refueling program, also conducted by Boeing Phantom Works, will provide even greater UCAV range and loiter capability. The X-45C will also have a larger payload capability, including the ability to carry two 2,000-pound Joint Direct Attack Munitions (JDAMs).

The X-45C design for the Navy will be based on the Air Force X-45C air vehicle, but it will include changes required to assess potential carrier suitability and other Navy-unique needs. These changes relate to structure, landing gear, a tail hook mechanism and advanced avionics required to demonstrate precision approach and landing.

The first flight of the X-45C air vehicle is scheduled for early 2006.

The X-45A technology demonstrators are currently verifying the core functionality of the software necessary for these and related missions. The X-45C concept for the Air Force and Navy will demonstrate the military utility and operational value of the UCAV system.

The X-45 UCAV system is being developed by the Boeing Phantom Works, which is the advanced R&D unit and catalyst of innovation for the enterprise. By working with the company's business units, it provides advanced solutions and innovative, breakthrough technologies that reduce cycle time and cost while improving the quality and performance of aerospace products and services.

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