GAO Highlights

Highlights of GAO-23-105554, a report to congressional committees

April 2023

# FUTURE VERTICAL LIFT AIRCRAFT

## Army Should Implement Leading Practices to Mitigate Acquisition Risk

## Why GAO Did This Study

Aircraft capable of vertical take-off and landing—primarily helicopters—support vital Army missions. The Army has been working for decades to develop new capabilities in this area. However, prior efforts were canceled due to cost increases, schedule delays, and performance shortfalls.

A House report included a provision for GAO to review the Army's Future Vertical Lift portfolio. GAO's report addresses (1) planned acquisition approaches, (2) the extent to which cost and schedule estimates align with leading practices, and (3) the extent to which technical risk mitigation aligns with leading practices.

To conduct this work, GAO reviewed acquisition documentation, analyzed cost estimates and schedules, and compared them to leading practices. GAO also interviewed officials from Future Vertical Lift, the Army, and the Office of the Secretary of Defense.

## What GAO Recommends

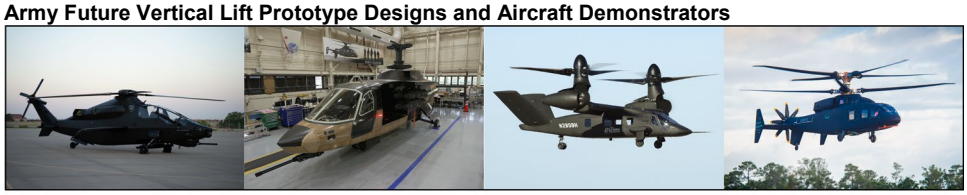
GAO is making seven recommendations to the Army, including that the Future Vertical Lift portfolio improve cost estimates, demonstrate critical technologies prior to starting system development, and conduct a technology risk assessment, as appropriate. The Army concurred with one recommendation, and concurred with the intent of the remaining six.

View GAO-23-105554. For more information, contact Jon Ludwigson at (202) 512-4841 or ludwigsonj@gao.gov.

## What GAO Found

The Army is developing several aircraft systems to supplement and replace its aging fleet of helicopters. Aircraft in this portfolio, known as Future Vertical Lift, are to perform attack, transport, and reconnaissance missions, and are designed to have upgraded capabilities—for example, increased payload and range.

**Army Future Vertical Lift Prototype Designs and Aircraft Demonstrators**



Future Attack Reconnaissance Aircraft

Future Long Range Assault Aircraft Demonstrators

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The Army is currently developing two crewed and one uncrewed aircraft systems.

- **Future Attack Reconnaissance Aircraft** is intended to address the Army's capability gap for a dedicated, armed aerial reconnaissance platform, and plans to deliver aircraft in 2030. Acquisition officials are currently conducting an analysis of alternatives and developing two prototypes.
- **Future Long Range Assault Aircraft** is intended to conduct long-range assault missions and serve as a multi-role aircraft to transport personnel and equipment. In fiscal year 2023, the Army reported awarding a contract to a single vendor to complete preliminary design, deliver a virtual prototype, and deliver a physical prototype for flight tests.
- **Future Tactical Unmanned Aircraft System** involves acquiring uncrewed vehicles in phases. The first phase is to meet urgent battlefield needs within 2 years; the next is to develop a new vehicle to conduct reconnaissance missions.

The cost and schedule estimates for these aircraft development efforts did not always meet leading practices. For example, the assault and uncrewed aircraft systems minimally met the threshold for a credible cost estimate. In addition, the business cases for these aircraft systems did not meet leading practices because they did not fully identify schedule risks.

In addition, the plans for the three aircraft systems do not meet leading practices for maturing and assessing technologies. GAO's leading practices recommend demonstrating critical technologies in an operational environment prior to system development. However, the crewed systems plan to demonstrate technologies after that point. Further, the Army is developing the new uncrewed system without first conducting a technology risk assessment.

Without credible cost estimates, operationally demonstrated technologies, and knowledge of associated risks, the Army is in danger of not meeting its goals for fielding these capabilities.