



The Future of Army Aviation Requirements

Introduction

U.S. Army aviation—rotary-wing, fixed-wing and unmanned—is crucial to both wartime and peacetime operations. It is a powerful force multiplier, enabling ground commanders to exploit the vertical dimension and contributing to the control of land and influence over populations on the 21st century battlefield. Aviation assets provide vital capabilities across the full spectrum of military operations, from homeland defense and disaster relief to peace enforcement and major combat operations. To remain a key force multiplier for the generation of Soldiers yet to serve, Army aviation must shape its future requirements now.

Current Modernization Programs

In 2003, the Army Chief of Staff directed a top-to-bottom review of Army aviation. The study laid out dramatic changes required to make Army aviation more capable, lethal, sustainable and affordable. The results of the study led to the design of new modular aviation formations designed for expeditionary warfare. The study recommended canceling development of the RAH-66 Comanche and using those resources to modernize the then-current fleet of aircraft and invest in new systems such as Aircraft Survivability Equipment and the Light Utility Helicopter (LUH).

Upgrade programs are providing the latest technology and most advanced capabilities to the Army's reconnaissance, attack, utility and heavy lift helicopters, extending their service lives into the 2030s. Improvements such as enhanced sensors, advanced communications and new engines and rotor blades will make them lower maintenance and more capable, lethal and survivable. These upgraded aircraft will expand aviation commanders' options and flexibility in supporting the needs of ground maneuver commanders.

Developing Future Requirements

Since 2001, Army aviators have flown more than three million combat hours—the highest sustained operational

tempo since the Vietnam era. Ground commanders continue to request additional aviation assets to support their operations, and demand shows no sign of diminishing in this era of persistent conflict. The Army is currently engaged in a far-reaching transformation of its ground forces, and as this portion of the Army future takes shape, Army aviation must also adapt. Most of the Army's current aircraft models are scheduled for retirement in the mid- to late 2030s. Development of replacement aircraft must begin soon to ensure that replacements are available when older airframes reach the end of their service lives. Rapidly evolving technologies are already poised to offer new and improved capabilities for the aviation force. Two key ideas will guide Army aviation as it develops its future requirements: a joint focus and the multi-role concept.

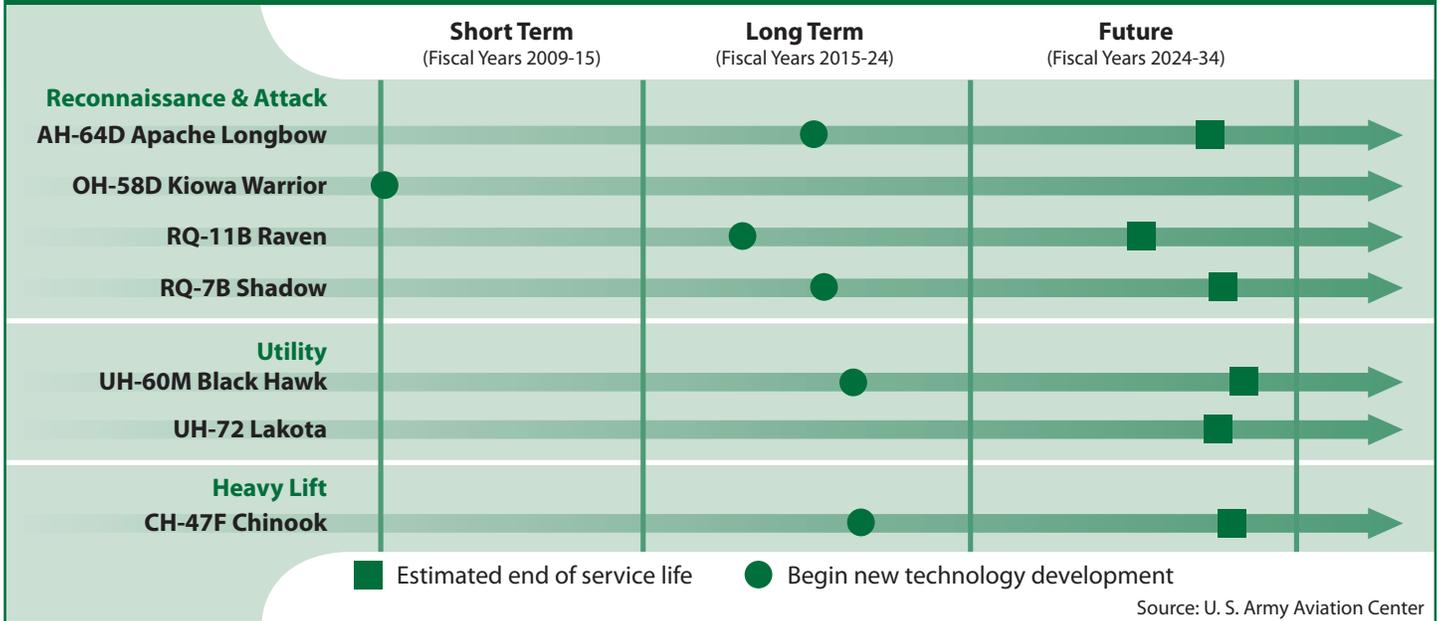
A Joint Focus

As they engage adversaries around the world, the U.S. armed forces continue to evolve into an ever-more-integrated joint force. Joint operating concepts bring together capabilities from all the services to produce joint warfighting. To maximize effectiveness, the joint force is focusing on complementary capabilities and jointly developed platforms. The Joint Capabilities Integration and Development System (JCIDS), instituted in 2003, calls for capabilities to be developed on the basis of needs across the services, not just the needs of one service.

All four services have aviation requirements and capabilities. Developing the next generation of aviation capabilities jointly will offer opportunities for common solutions and shared platforms. The F-35 Joint Strike Fighter and the Joint Unmanned Aerial Systems (UAS) provide lessons in how this process can work. When multiple services buy disparate systems to accomplish similar missions, it disperses limited purchasing power and creates greater maintenance, support and training costs. Joint development can provide cost savings, avoid duplication of effort and contribute to greater



Army Aviation Platform Timeline



integration and more effective joint warfighting. Joint development begins with joint requirements. The Army’s aviation planners are committed to maintaining a joint focus in every step of the requirements process, working with sister services to identify common missions and needs, formulate requirements and develop joint solutions.

The Multi-role Concept

Army aviation planners have come to realize that the next generation of capabilities may not simply be replacements for existing platforms; the aircraft of the future may not fit comfortably into the old categories of reconnaissance, attack, utility and cargo. The paradigm of a separate platform for each mission may be at an end. Instead, future aircraft may be multi-role, offering diverse capabilities, flexible options and significant cost savings.

Already, the Army employs a heavy attack helicopter that can also perform some reconnaissance missions, a light reconnaissance helicopter that also conducts some attack missions, and UAS that can do both attack and reconnaissance tasks. Technological advances will allow more overlapping capabilities, allowing the Army to produce the same breadth of capabilities with fewer platforms. Planners are studying

the feasibility of combining the attack and reconnaissance capabilities into one helicopter, which may also be able to provide some utility capabilities. Tilt-rotor technology is being studied for its potential to provide an aircraft that can perform both utility and heavy lift. The value of UAS has even led Army planners to consider “manned-optional” aircraft that could be flown by a pilot or by remote control depending on the mission parameters. Such multi-role aircraft will be more cost-effective by providing the same level of capability with fewer aircraft.

Looking Ahead

Joint, multi-role aircraft are the way of the future for Army aviation. Gone are the days when each military service would tailor highly specific requirements to very narrow mission areas. The technologically advanced aircraft of tomorrow will be flexible enough to fulfill various missions for multiple services, providing joint commanders with an array of options and capabilities far beyond what they have today. Joint capabilities in a joint force will keep the United States one step ahead of its adversaries, and Army aviation will do its part, continuing to be a vital piece of 21st century landpower.

Key Points

- The Army’s modernization program will keep its aircraft flying through the next two decades.
- The Army is currently developing its requirements for the next generation of aircraft.
- Aviation planners are committed to maintaining a joint focus in the requirements process and developing joint solutions where appropriate.
- Future aircraft will be multi-role, making them more flexible and capable.