Future Long Range Assault Aircraft

Program Update for HAMA

COL David Phillips

Project Manager, FLRAA

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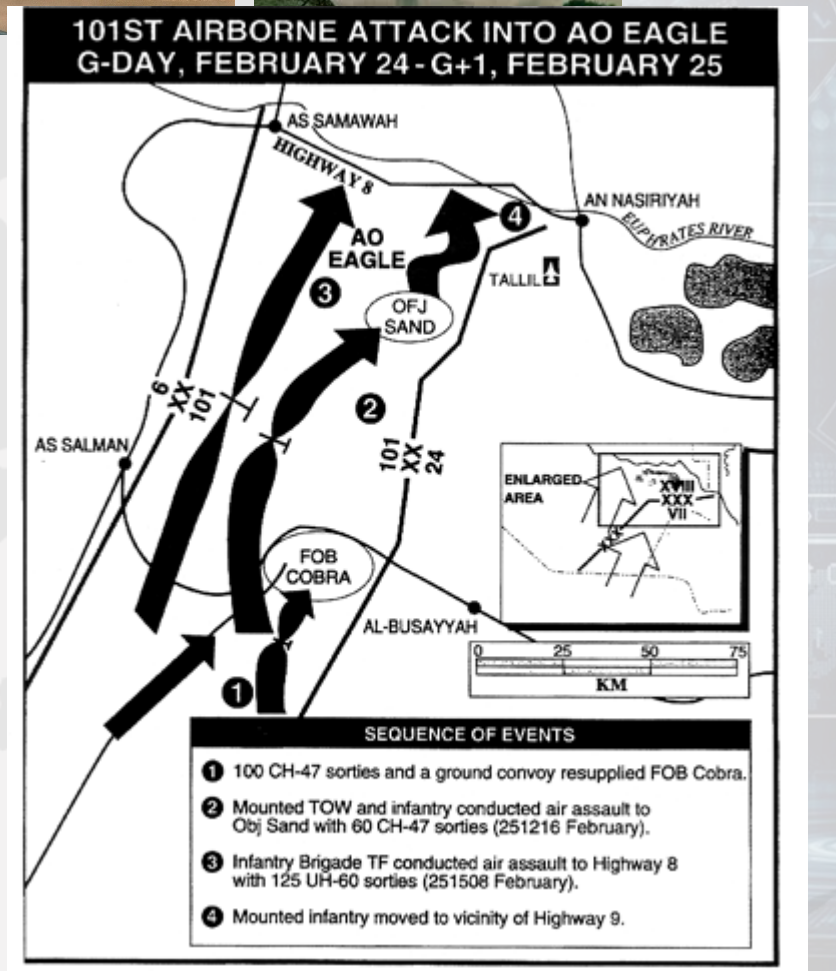
History





On August 2, 1990 with little warning, Iraq, invaded Kuwait with the 4th largest Army in the world, and totally occupied the country in less than forty-eight hours. *In August, the 101st Airborne Division airlifted (in 56 C-141s and 49 C-5s) 117 helicopters, 487 vehicles, and 2,742 troops into Saudi Arabia to deter Iraq from invading Kuwait. By October, the remainder of the 101st had arrived by air and sealift.*

Operation Desert Storm*, began January 17, 1991 with an air campaign, and on February 24, 1991, the ground war began.* ***In 96 hours, the 101st Airborne Division moved three brigades over 350 miles, with 370 aircraft, and >1000 sorties****, they established FOB Cobra, cut Highway 8, and cut off five divisions of the Republican Guard, which were then destroyed by the U.S. VII Corps and attack helicopters from the 101st on the Highway of Death. The ground war was over in 100 hours. The 101st cut off lines of communications, flying deep into Iraq within striking distance of Baghdad and blocked escape routes,* ***effectively validating the concept and unmatched capability of the modern air assault division.***



Army Modernization Priorities

ARMY AVIATION
DECISIVE IN LAND WARFARE

FVL CFT LOEs

Future Vertical lift will develop next generation vertical lift aircraft to address current identified aviation capability gaps against peer/near peer competitors. The CFT will address these gaps by accelerating the following four (4) technologies:

FARA Capability Set 1

WHAT: Future Attack Reconnaissance Aircraft

WHY: Army Aviation requires revolutionary advances in maneuverability, agility, lethality, survivability, and sustainment to operate in a highly contested battlefield

HOW: Increase responsiveness, reach, endurance, and lethality, initial prototype FY23

FUAS & AUAS

WHAT: Future & Advanced Unmanned Aircraft Systems

WHY: Army Aviation requires both incremental (FUAS) and revolutionary (AUAS) advances in maneuverability, agility, lethality, reach, survivability, and sustainability to operate in a highly contested battlefield

HOW: Increase speed, operational reach, payload, runway independence, and endurance, initial capability FY27

FLRAA Capability Set 3

WHAT: Future Long Range Assault Aircraft

WHY: Army Aviation requires revolutionary advances in maneuverability, agility, reach, survivability, and sustainment to operate in a highly contested battlefield. This capability is the eventual UH-60 replacement.

HOW: Increase speed, distance , payload, and endurance, initial prototype FY25

MOSA

WHAT: Modular Open Systems Architecture

WHY: Army Aviation requires revolutionary advances in system architecture to enable rapid changes to digitally-enabled capabilities to operate in a highly contested battlefield

HOW: Increase ability to rapidly and affordably evolve aircraft avionics and mission equipment through an open system architecture, prototype FY24, MSAD Complete FY26

Maintaining Trust with Soldiers on the Ground

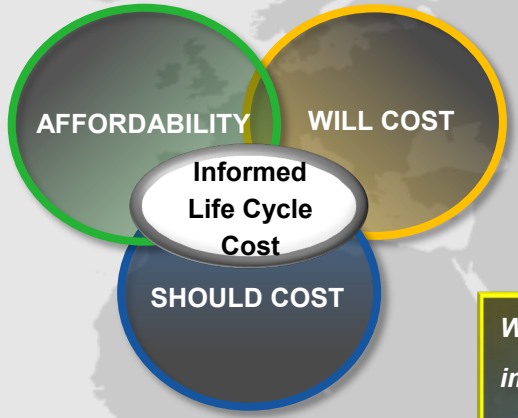
USAACE
ABOVE THE BEST

Future Vertical Lift
FVL
Cross Functional Team

FLRAA Program Overview

FLRAA will enable multi-domain operations, flying further and faster, conducting air assault and MEDEVAC support to the maneuver force, in a contested and ever-changing environment.

Life cycle affordability is critical to fielding a next generation long range assault capability that can be adapted for future missions and threats – current & future performance requires sustained affordability.



With the award of CD&RR Phase II on March 30, FLRAA is implementing a design and requirements approach that is the first of its kind. Phase II ensures FLRAA capabilities are affordable; meet Army requirements; and deliver on schedule to deter our enemies with power projection, and win in MDO. The Army's Plan is to execute a multi-layered, risk reduction approach to accelerate FUE in 2030.

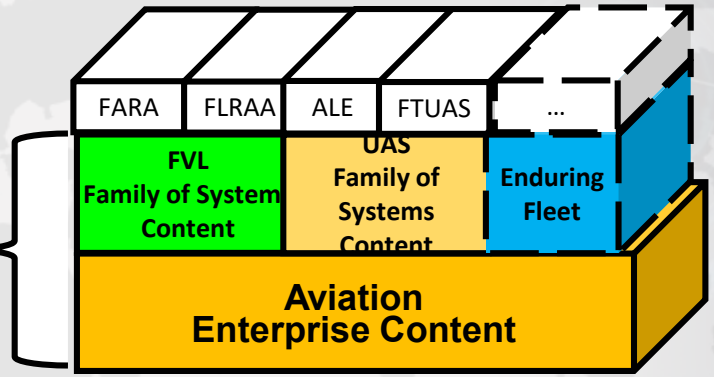
FLRAA Technology Road Map Leveraging MOSA

Lines of Effort Needed to Achieve MOSA Objectives

- **Establish and Utilize an Architecture Collaboration Working Group (ACWG)**
  - Develops/matures and approves the FVL architecture requirements framework
  - ROI: Looks across platforms developing a requirements baseline that '***enables commonality***' within the FoS's and across Army Aviation

- **Develop and Mature a FVL Architecture Framework (FAF)**
  - Requirements baseline for RFP solicitations
  - ROI: Define architectural requirements achieving
  - '***adaptability***' and '***lifecycle***' affordability

FAF



- **Leverage Repository of Government Reference Architectures (GRA)**
  - Enables re-use and commonality across services/systems
  - ROI: Reduces development costs, mitigates risk, reduces verification time

- **Establish an Architecture Collaboration Environment (ACE)**
  - Allows for easy review and update of the FAF by many agencies
  - ROI: Define architectural requirements achieving adaptability
  - and '***life-cycle***' affordability

Technology Maturation

	Sony Trinitron - 2001	Panasonic Viera - 2013	Samsung - 2020
Performance	4:3, 480p, RCA	16:9, 1080p, 3D, HDMI, WiFi	4KUHD (3840x2160), HDR, Smart TV
Size	32” (35.4” x 27.4” x 22.6” = 21,921 in^3)	55” (50.6" x 30.0" x 2.0“ = 3,036 in^3)	65” (57.4" x 33" x 2.3“ = 4,356 in^3)
Weight	~ 165 lbs	~ 83 lbs	~ 55 lbs
Cost (2021 Constant Dollars)	~ $1494	~ $1133	~$706

Increased Capability, Lower Size, Weight, and Cost

Challenges/Opportunities

Technology Maturation = Incremental Solutions

- **JCIDS "Increment Definition"**
  - Technology development of the second increment begins while the first increment is in EMD
  - Increment timing depends on program particulars – reviews, tests, analyses, and milestones
- **Continuous market research** for emerging / existing technologies at the subsystem / component level

Areas of Interest for Future Investment = Must be MOSA-Aligned

- **ASE**
- **Future engine capability**
- **Communications**
- **ALE**
- **DVE**
- **Applications**
- **Training**

Intellectual Property / Data Rights

- Extensive technical data and intellectual property analyses have helped determine what technical data rights are required to support the sustainment of each hardware and software system.
- Additional analyses and efforts will continue throughout the MTA / PoR to build upon the established approach. This is a proactive approach focused on balancing the "Crown Jewels" of sustainment.

Closing Thoughts / Questions?

“If you have the right people on the bus, the problem of how to motivate and lead people largely goes away. The right people don’t need to be tightly managed or fired up; they will be self-motivated by the inner drive to produce the best results; to be part of creating something great."

- Jim Collins, Good to Great