

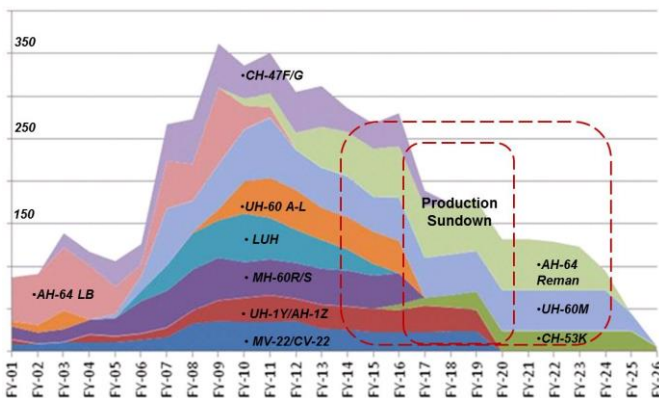
Execution of the FVL Strategic Plan will impact Vertical Lift Aviation Operations for the next 60+ years

Sequencing the Next Generation of Vertical Lift

Must answer the following questions...

- What capability set addresses the most pressing capability gaps?
- What capability set addresses the most critical joint needs?
- What capability set optimizes the most advanced technology / commonality?
- What capability addresses the sundown of the legacy fleet?

* Technology advances applied to the legacy fleet



FVL S&T

- ⇒ Pursue an Enterprise S&T strategy for FVL
- ⇒ Identify critical enabling technologies
- ⇒ Prepare and maintain an S&T roadmap supporting FVL development
- ⇒ Leverage engineering resources of the OSD Communities of Interest
- ⇒ Coordinate with Industry and VLC partners

Elements of the FVL Strategy

- Joint Service, Department-wide, portfolio approach—Family of Systems
- Common Systems and Open Architecture
- Industry and Academia Partnership/ Interaction
- Setting conditions for successful transition to Program(s) of Record

Vertical Lift Consortium (VLC)

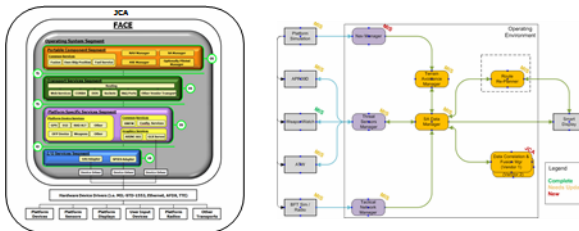
- 60+ traditional and non-traditional, large and small business, academia, and non-profit organizations.
- Self-formed in 2010 to provide the government broader visibility and access to leading vertical lift technology, and to provide Consortium members a better understanding of Warfighter requirements.
- Entered into an Other Transaction Agreement with the government to streamline the RDT&E process and to facilitate rapid development of prototype systems.

<http://www.verticalliftconsortium.org>

Joint Multi Role Technology



Air Vehicle Demonstration



Mission Systems Architecture Demonstration

Joint Multi Role Technology Demonstrator

- ⇒ Demonstrate air vehicle and mission systems architecture technologies for the next generation fleet
- ⇒ Build and fly two demonstrator aircraft
- ⇒ Evaluate value of technologies, configurations, and capabilities
- ⇒ JMR TD—not an FVL prototype

FUTURE VERTICAL LIFT

Deliver



The Next Generation of Vertical Lift Technology for The Joint Warfighter

The Department of Defense will design, develop and field a fleet of next generation air vehicles that will ensure the United States' dominance in the vertical lift domain throughout the 21st century and beyond. The Department will aggressively pursue the most capable aircraft at the best value by minimizing development, acquisition, and life cycle costs through Joint solutions of common core technologies, architectures, and training, emphasizing the ability to conduct safe, reliable and continuous operations world-wide in all environmental conditions.

-FVL Strategic Plan 2014



Define Design Develop



FVL, A New Way Forward



Future Vertical Lift The Past

- C**ongress directed DoD to “outline a joint approach of the development of vertical lift aircraft for all the military Services” in the 2009 NDAA. In response:
- **2009 Secretary of Defense** established the Future Vertical Lift (FVL) Initiative to focus technology development
 - **2009 AT&L** conducted a Capabilities Based Assessment, and developed a Science and Technology Plan.
 - **2012 DepSecDef** signed a Strategic Plan
 - **2013 Joint Staff** approved Initial Capabilities Document (ICD) for FVL Family of Systems
 - **2014 Joint Staff** approved Developmental Concept of Operations (CONOPS)



Future Vertical Lift The Way Forward

- **Now thru 1st QTR FY'17 - Joint requirements development for the FVL Family of Systems (FoS)**
- **MDD in 1st QTR FY'17**
- **First Flight of JMR-TD in 2017**
- **RFP Release for first CapSet in 2019**
- **Milestone A for first CapSet in 2019**
- **LRIP for first CapSet in 2030**

Future Vertical Lift FoS				
Light	Medium			Heavy
<ul style="list-style-type: none"> • Cockpit • FACE/JCA • Training • Requirements • Reduced overhead • Mission flexibility <p>All Air Vehicles have common...</p> <ul style="list-style-type: none"> • Sustaining • Maintaining • Repair parts and components 				
<p>Capability Set 1</p> <p><u>Missions:</u></p> <ul style="list-style-type: none"> • Reconnaissance • Attack • Security • CCA/CAS • Surface Warfare • Direct Action • Maritime Interdiction Operations 	<p>Capability Set 2</p> <p><u>Missions:</u></p> <ul style="list-style-type: none"> • Reconnaissance/Attack • Security • CCA/CAS • MEDEVAC • Surface Warfare • Direct Action • Anti Submarine Warfare • CSAR • Maritime Interdiction Operations • Mine/Counter Mine 	<p>Capability Set 3</p> <p><u>Missions:</u></p> <ul style="list-style-type: none"> • Mine/Counter Mine • MEDEVAC • Air Assault • Logistics • HA/DR • Amphibious Assault • NEO 	<p>Capability Set 4</p> <p><u>Missions:</u></p> <ul style="list-style-type: none"> • MEDEVAC • Air Assault • Logistics • HA/DR • Amphibious Assault • NEO 	<p>Capability Set 5</p> <p><u>Missions:</u></p> <ul style="list-style-type: none"> • MEDEVAC • Air Assault • Logistics • HA/DR • Amphibious Assault • NEO
<ul style="list-style-type: none"> • Army • Marines • US Special Operations • Navy • Coast Guard • (DHS) 	<ul style="list-style-type: none"> • Army • Marines • US Special Operations • Navy • Coast Guard • (DHS) 	<ul style="list-style-type: none"> • Army • Marines • US Special Operations • Navy • Coast Guard • (DHS) 	<ul style="list-style-type: none"> • Army • Marines • US Special Operations • Navy 	<ul style="list-style-type: none"> • Army • Marines • US Special Operations • Navy

Future Vertical Lift:

- **Remain at the forefront of vertical lift warfighting by investing in the evolution of the next generation of vertical lift technology**
- **Build consensus by developing and prioritizing Joint military capability requirements for the FVL Family of Systems**
- **Optimize strong support from a robust science and technology effort**

FVL must address our most critical capability gaps and military needs across the Joint community...

- **Maximize open, Joint Common Architecture**
- **Provide Game changing Speed/Range/Payload**
- **Dominate the environment**
- **Increase Survivability/Reliability/Maintainability**