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Future Vertical Lift (FVL) Capabilities Based Assessment

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Director, Joint Advanced Concepts
OSD (AT&L)**

19 November 2008



AHS Federal City Chapter

Authorized for Public Release



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Why We're Doing a CBA

(1) Congressional Request:

"The Congressional Rotorcraft Caucus is concerned about the lack of a strategic plan for improving the state of vertical lift aircraft in the United States."



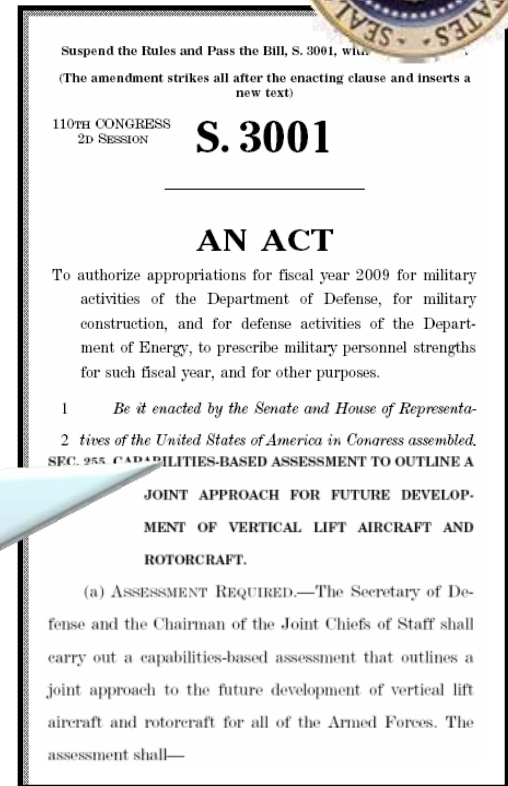
(2) SecDef Direction:



"I have directed the Joint Advanced Concepts Directorate...to lead the development of a CBA"

"Sec. 255. Capabilities Based Assessment. The SecDef... shall carry out a CBA that outlines a joint approach of the future development of vertical lift aircraft for all the military services."

(3) 2009 National Defense Authorization Act:



SecDef Direction



THE SECRETARY OF DEFENSE
1200 DEFENSE PENNSYLVANIA
WASHINGTON, DC 20301-1000

MAY 21 2008

The Honorable Joe Sestak
U.S. House of Representatives
Washington, DC 20515

Dear Representative Sestak:

Thank you for your letter of January 18, 2008, requesting a capabilities-based assessment (CBA) outlining a joint approach to the future development of vertical lift aircraft for the Military Services. D&D vertical lift capabilities have been a key component in our success in the Global War on Terror, particularly in Iraq and Afghanistan.

In response to your request, I have directed the Joint Advanced Concepts Directorate, Office of the Under Secretary of Defense for Acquisition, Technology, and Logistics, to lead the development of a CBA that will outline a joint approach to the future development of vertical lift aircraft for all Military Services. The Joint Staff, in conjunction with U.S. Transportation Command and the Services, will develop a strategic plan to meet the needs identified in the CBA, with the emphasis on common Service requirements. The Joint Staff will work with the Deputy Under Secretary of Defense for Science and Technology to develop a detailed science and technology plan in support of this strategic plan, including the resources required for implementation. The Joint Advanced Concepts Directorate will provide the results of this assessment no later than the 3rd quarter of Fiscal Year 2009.

Your continued support of our men and women in uniform is appreciated. A similar letter has been sent to Representative Genger.

Sincerely,
R. M. Gates

Defining the future of vertical lift

21 May 08 Secretary Gates: "I have directed the Joint Advanced Concepts Directorate... to lead the development of a CBA that will outline a joint approach to the future development of vertical lift aircraft for all the Military Services."

A joint collaborative environment for future capability discussions





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FVL Assessment Tasks per NDAA

Deliverables:

2009
NDAA

- Capabilities Based Assessment
- Strategic Plan for Future Vertical Lift Aircraft for all Military Services
- Detailed Science & Technology Plan, including the resources required for implementation
- Vertical Lift Industrial Base Wargame (OSD IP)
- Study Plans in Work
- Rotorcraft Survivability Study (due Aug '09)



3rd Qtr FY10

- **Capability Assessment Mission:** Using a **capabilities based approach**, assess whether the future range of military operations may require or benefit from vertical lift solutions with greater capabilities or efficiencies than current generation vertical lift aircraft provide. This assessment shall **support the development of a strategic plan** that formalizes the DOD strategic vision and **a detailed science and technology plan** for the next generation of vertical lift aircraft and rotorcraft per Section 255 of the 2009 National Defense Authorization Act (NDAA).



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Current Results Could be Better Helos in OIF/OEF

Overall numbers show helos to be lost at a far greater rate per sortie than our Vietnam experience
R/W mishaps have increased 215% since the beginning of GWOT
Defense Science Board 2007



> 371 Americans
> 215 Helicopters

OIF/OEF Aircraft Losses : Helo to TACAIR 19 : 1



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Challenges We Are Facing

- **Strategic Alignment for Vertical Lift Advancement**
 - Beyond timeframe we normally focus on - no formally identified gaps for vertical lift aircraft post-2020
 - Long acquisition lead time demands we start now to achieve post-2020 success
- Intent is to include ***all future vertical lift aircraft & missions*** (multiple mission categories)

Capabilities – Strategic Plan – S&T Plan – Resources Required

- CBA includes two related efforts (Strategic Plan and S&T Plan) to be delivered concurrently
 - And a third effort is Congressionally-directed Rotorcraft Survivability Study (Sec. 1043 of 2009 NDAA) due Aug '09

Involving Industry Early and Often – Establish Technological Art of Possible



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Vertical Lift Realities

- We must change approach if US Vertical Lift DoD / Industry Team are to advance the state of the art
- Must recognize the realities of the acquisition time necessary to develop new capabilities
- Must reduce program risk to better provide needed capabilities to the Warfighter

EXCESSIVE ACQUISITION TIMELINES

MV-22: 27 YEARS TO IOC

COMANCHE: 24 YEARS TO CANCELED

NUNN MCCURDY BREACHES

AH-1Z UH-1Y CH-47F MH-60R VH-71 ARH-70

CANCELLATIONS
COMANCHE ARH-70A

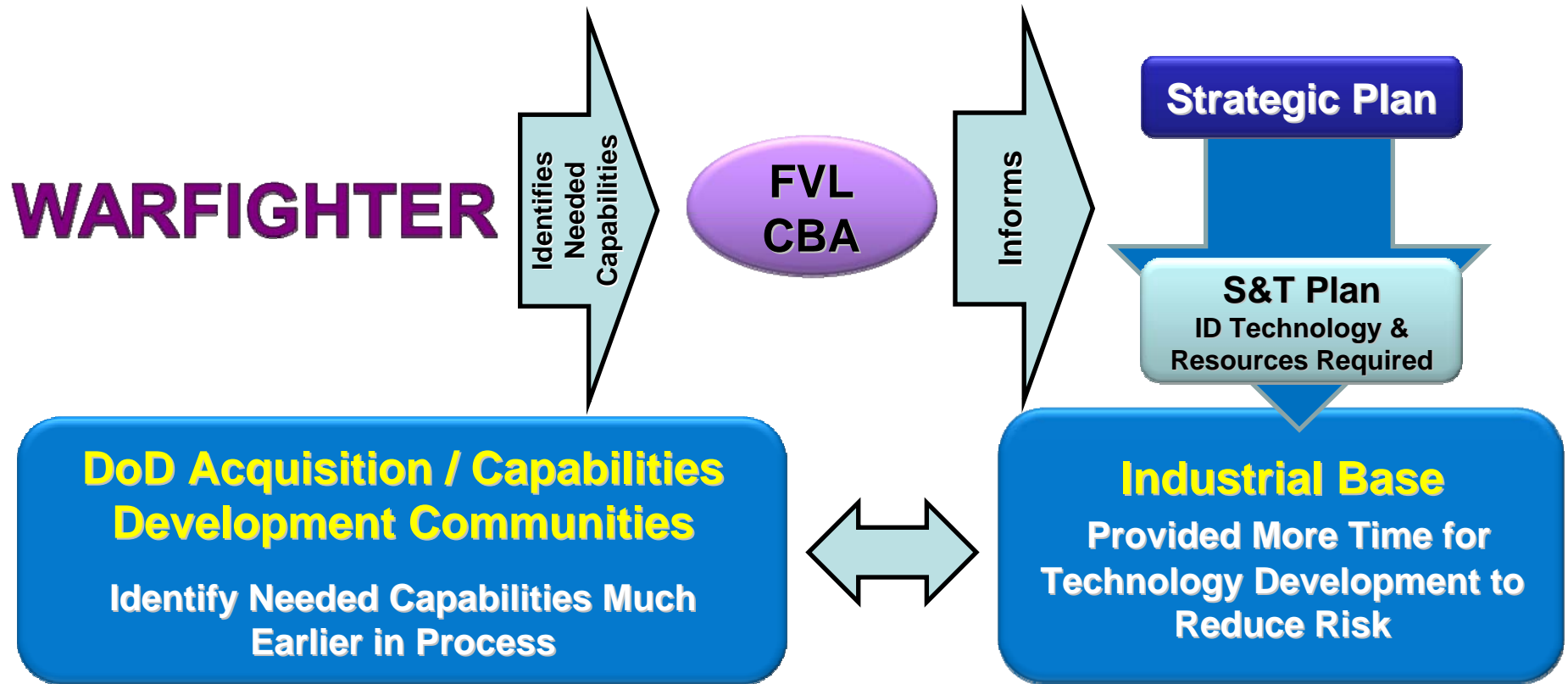
BATTLEFIELD SURVIVABILITY
215 HELICOPTERS LOST



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The Goal

Future Vertical Lift Way Forward - Beyond 2020

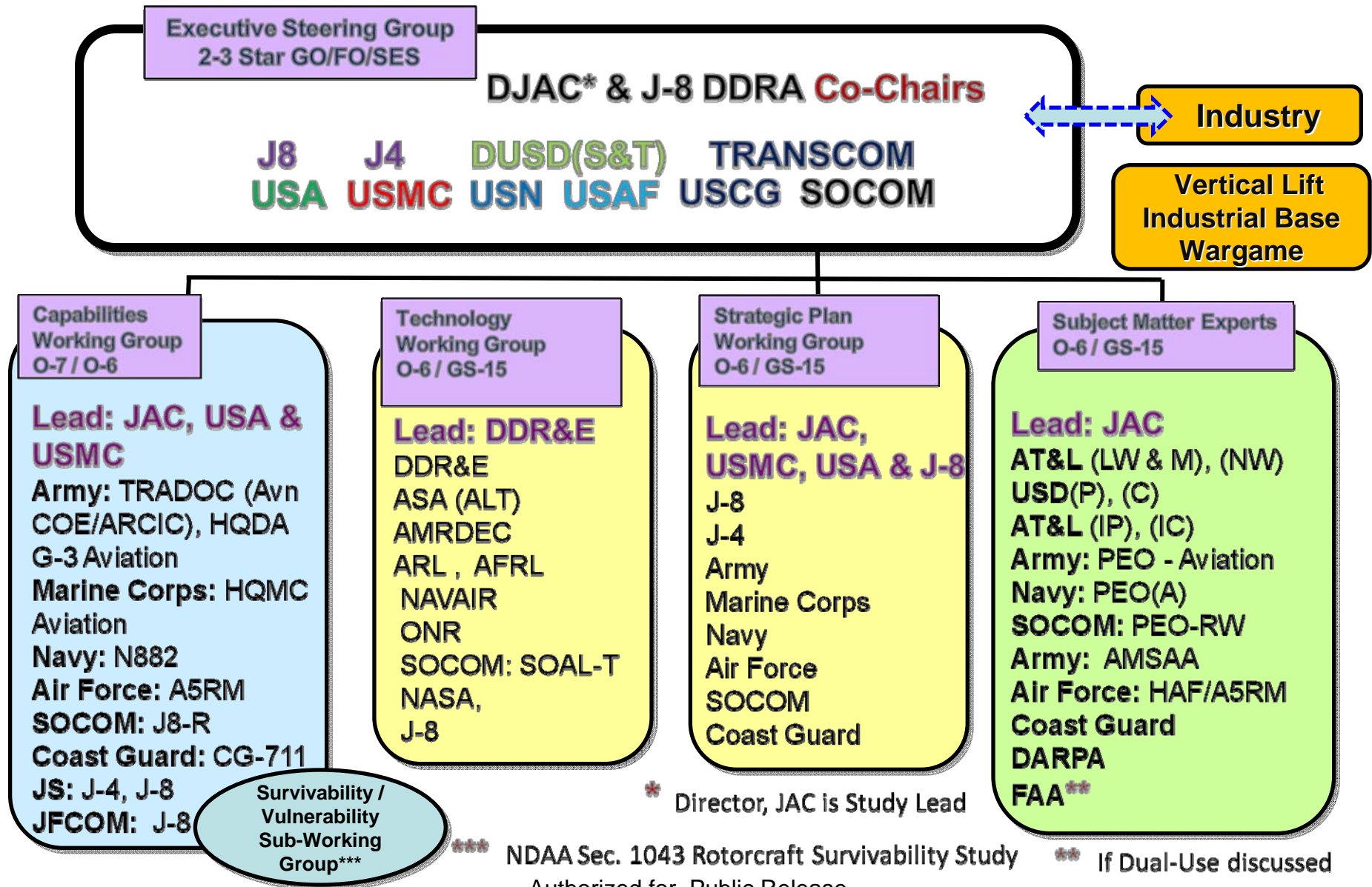


Break Cycle of Challenged Vertical Lift Acquisition Programs, And Deliver Next Generation Capability to Warfighter



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Proposed FVL CBA Organization

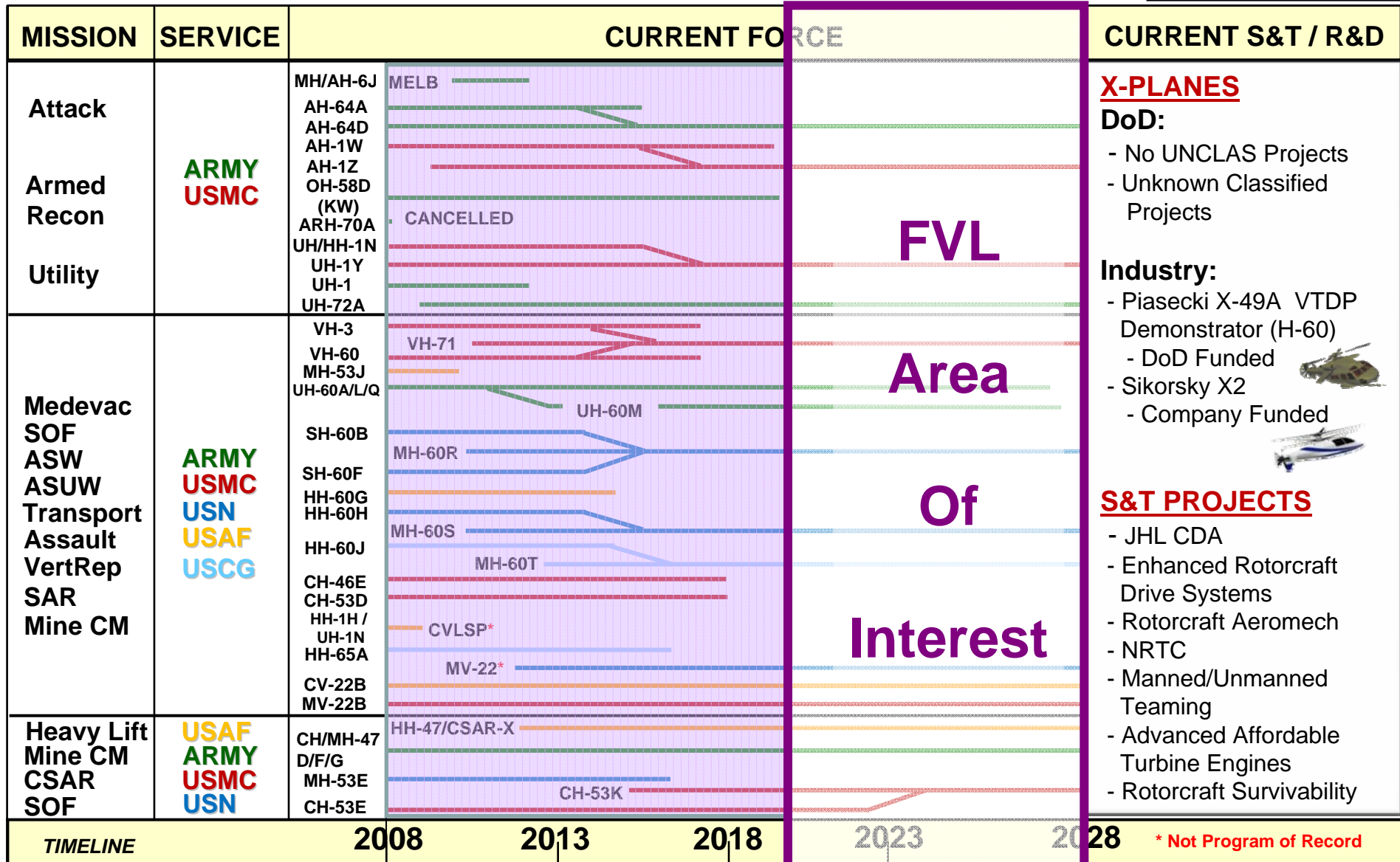




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Vertical Lift Programs of Record

| | |
|--------------|--|
| ARMY | |
| NAVY | |
| AIR FORCE | |
| MARINE CORPS | |
| COAST GUARD | |



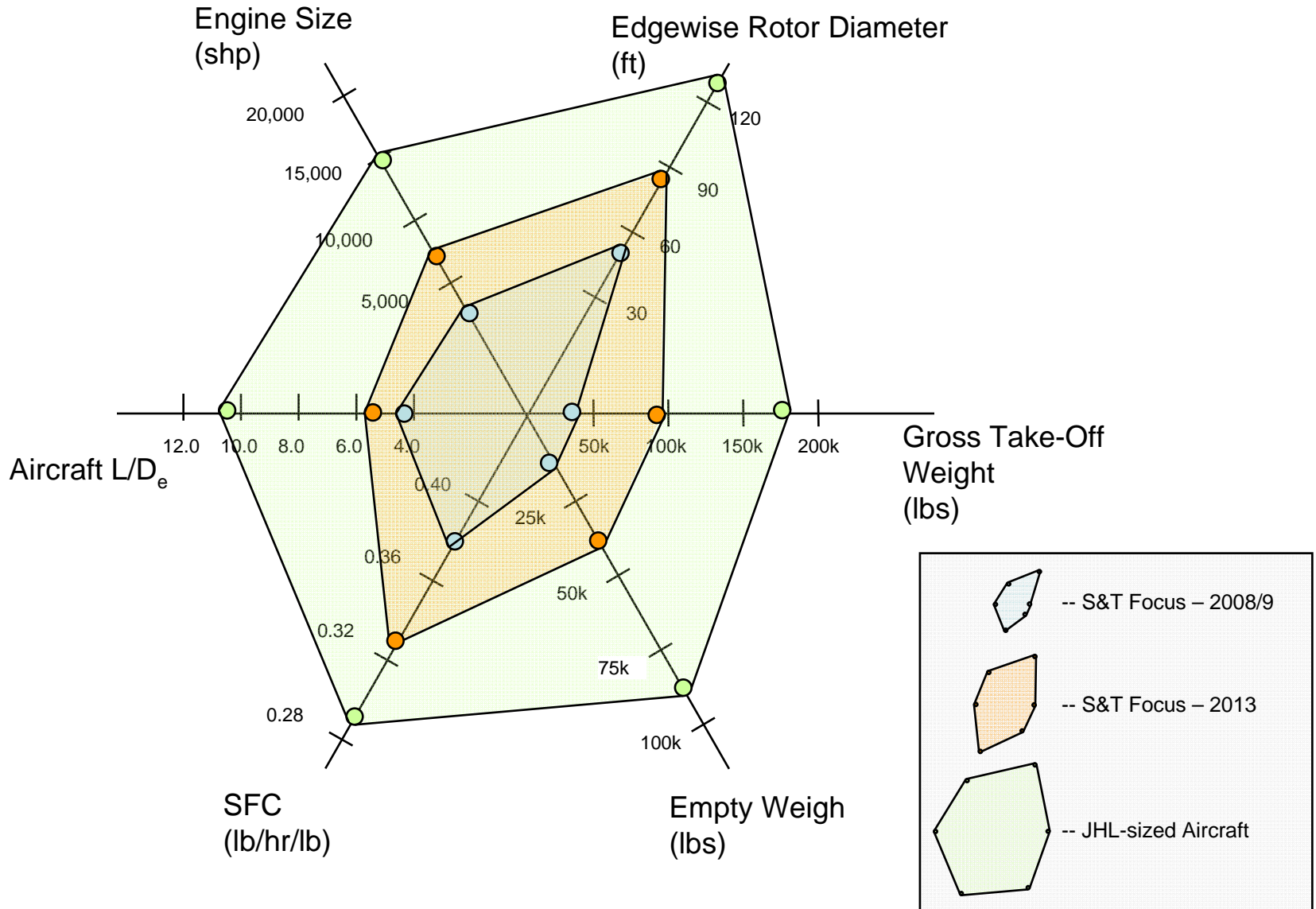
FVL
Area
Of
Interest



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The S&T Challenge

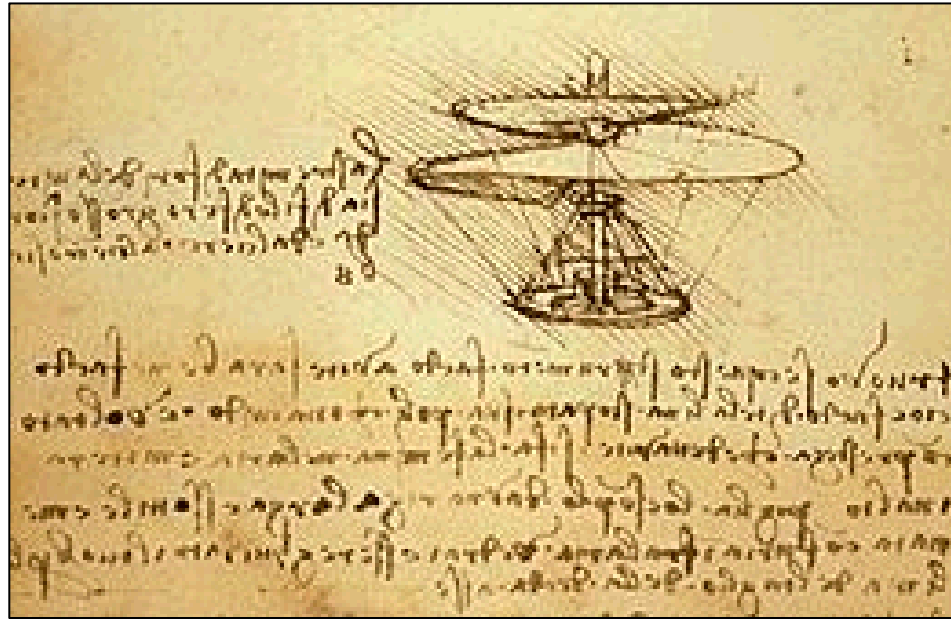
Joint Heavy Lift Example





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Questions



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<http://www.acq.osd.mil/at/jac/index.html>