



# Vertical Lift Aviation Industry Day





# Vertical Lift Aviation Industry Day

## A First Step Towards the Future of Vertical Lift Aviation

Tony Melita  
Office of Land Warfare and Munitions  
Office of the Secretary of Defense





ACQUISITION,  
TECHNOLOGY  
AND LOGISTICS

THE UNDER SECRETARY OF DEFENSE

3010 DEFENSE PENTAGON  
WASHINGTON, DC 20301-3010

OCT 26 2009

MEMORANDUM FOR SECRETARIES OF THE MILITARY DEPARTMENTS  
COMMANDER, U.S. SPECIAL OPERATIONS COMMAND  
DIRECTOR, DEFENSE RESEARCH AND ENGINEERING  
DIRECTOR, DEFENSE ADVANCED RESEARCH  
PROJECTS AGENCY  
DIRECTOR, FORCE STRUCTURE, RESOURCES, AND  
ASSESSMENT, J-8

SUBJECT: The Future Vertical Lift Initiative – A Construct for the Future

This memorandum establishes an initiative to improve the long-term state of military vertical lift aircraft and the U.S. vertical lift industrial sector. The Director, Land Warfare and Munitions/OUSD(AT&L), will lead this initiative with direct support and involvement from the Services, Joint Staff, SOCOM, DARPA, and DDR&E.

This initiative will build upon the ongoing Future Vertical Lift Capabilities Based Assessment, the associated Strategic Plan and Science and Technology Plan to establish a baseline for planning and execution over the next 20-25 years. Progress and continued viability will be assessed by the Defense Acquisition Executive and the Defense Acquisition Board at-least every five years.

This initiative will only be successful with the full support of, and in partnership with, the vertical lift aircraft industry. To that end, the Director, Land Warfare and Munitions is authorized to engage and contract with industry and academia as necessary and appropriate to enable such a partnership.

By August 15, 2010, the Director, Land Warfare and Munitions will address the Defense Acquisition Executive and present the organizational construct and portfolio of activities underway, to include a comprehensive POM-12 Issue Paper Proposal for any funding recommendations necessary to advance this initiative toward a proposed end-state.

This direction is effective immediately.

Ashton B. Carter



# Purpose of Industry Day

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To engage interested members of the U.S. Vertical Lift Aviation Private Sector to consider the benefits and opportunities of entering into an OTA with the DoD.

For the purposes of this meeting, the U.S. Vertical Lift Aviation Private Sector is defined as:

*U.S. companies, including U.S. companies under foreign ownership, control or influence (FOCI), that are both “FOCI-mitigated” and possess a facility clearance level (FCL) for the appropriate classification.*



# Why Do This Now?

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OSD sees urgent problems...

...that neither the DoD nor individual companies alone can fix....

But we can collaboratively address them with a long-term commitment!



# Agenda

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An OSD Perspective  
and  
Overview of Ongoing Activities

Mike Walsh

Partnering with the DoD:  
Consortium Construct  
and  
Proposed Way Forward

Denise Scott

Steve Talmadge

Q&A

All



# An OSD Perspective And Overview of Ongoing Activities

Mike Walsh  
OSD (AT&L)



# Vertical Lift: Meeting Mission Needs

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- “Aircraft of necessity” in two theaters since 2003; millions of hours flown
- Very harsh environment for rotary wing aircraft
- Utilization sustained at very high rates
- Operational availability, readiness, and reliability far exceed expectations
- Impressive logistics support





# ...But Challenges Remain

**Between October 2001 and December 2008:  
469 fatalities & 327 rotorcraft lost**

Number corrected since presentation

<b>Oct 01-Dec 08</b>	<b>% of Losses</b>	<b>% of Fatalities</b>	<b>Loss Rate<sup>1</sup></b>
<b>Combat Hostile Action</b>	<b>20</b>	<b>30</b>	<b>2.6</b>
<b>Combat Non-hostile</b>	<b>40</b>	<b>40</b>	<b>5.1</b>
<b>Non-Combat</b>	<b>40</b>	<b>30</b>	<b>1.7</b>

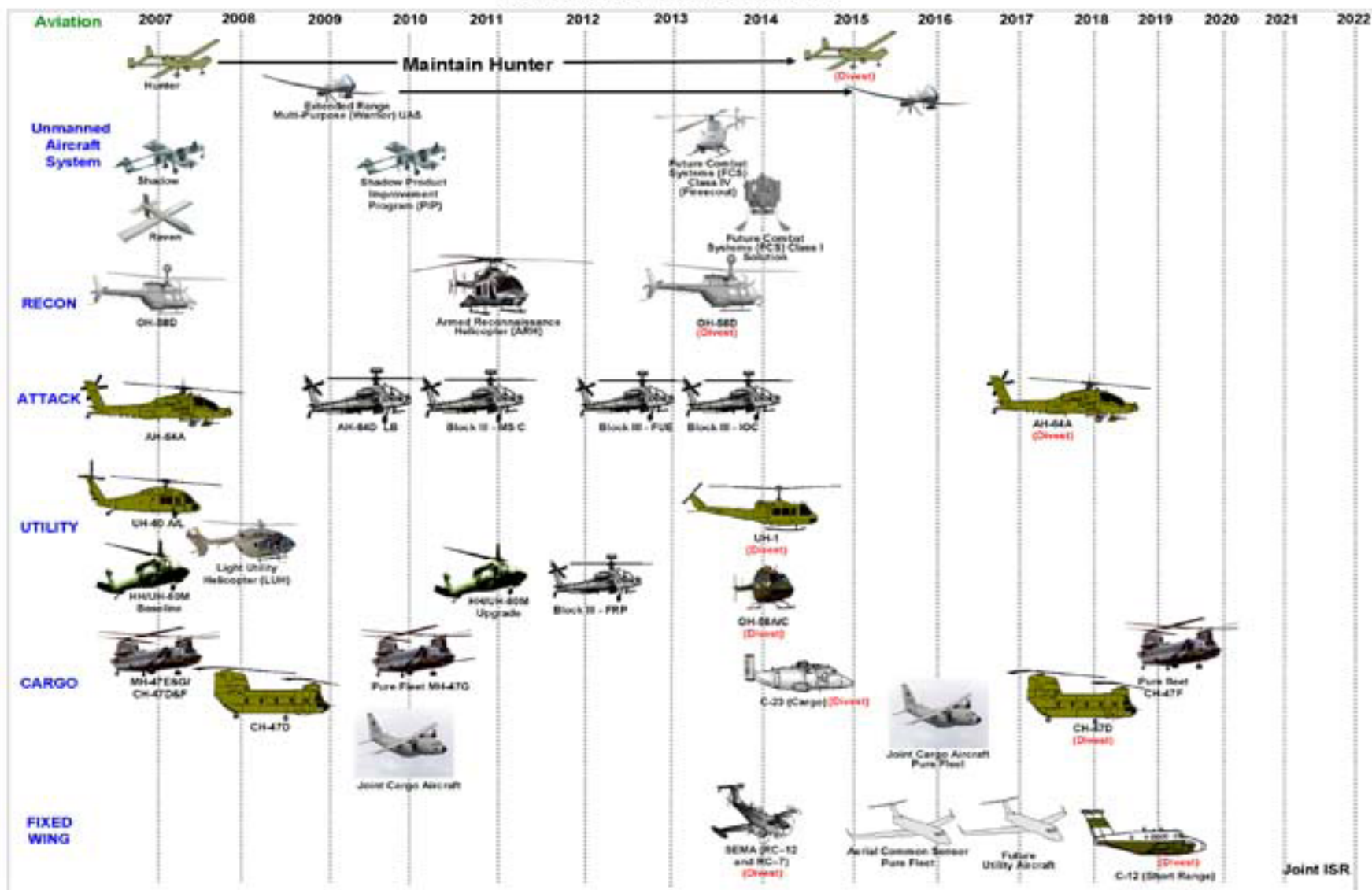
1. Per 100K flight hours,

**>80% of losses not due to hostile action**



# Army Modernization: Aviation and UAS

Modernization – Aviation and UAS



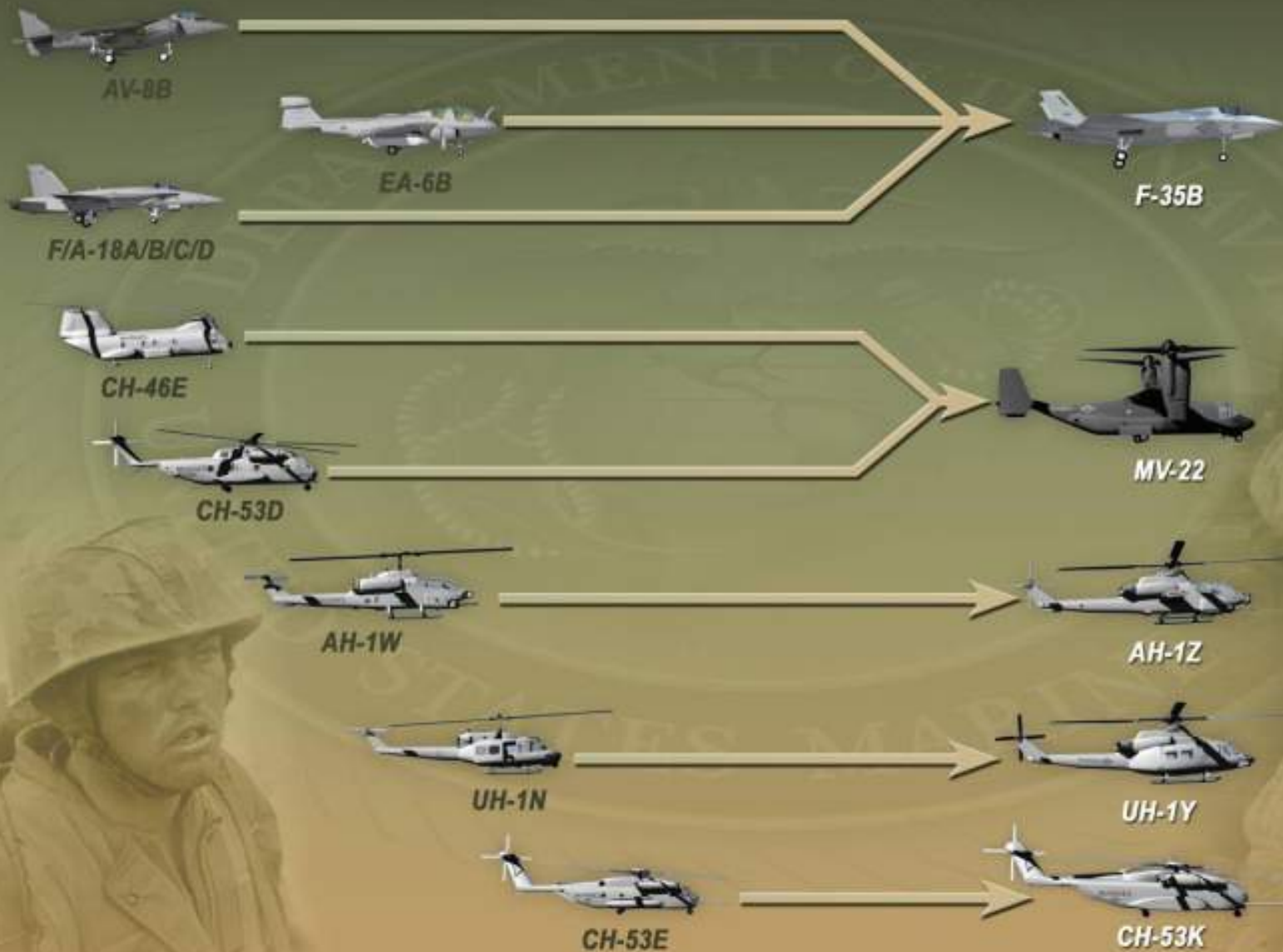


# Marine Aviation Modernization



Today

2015





# Vertical Lift Inventory

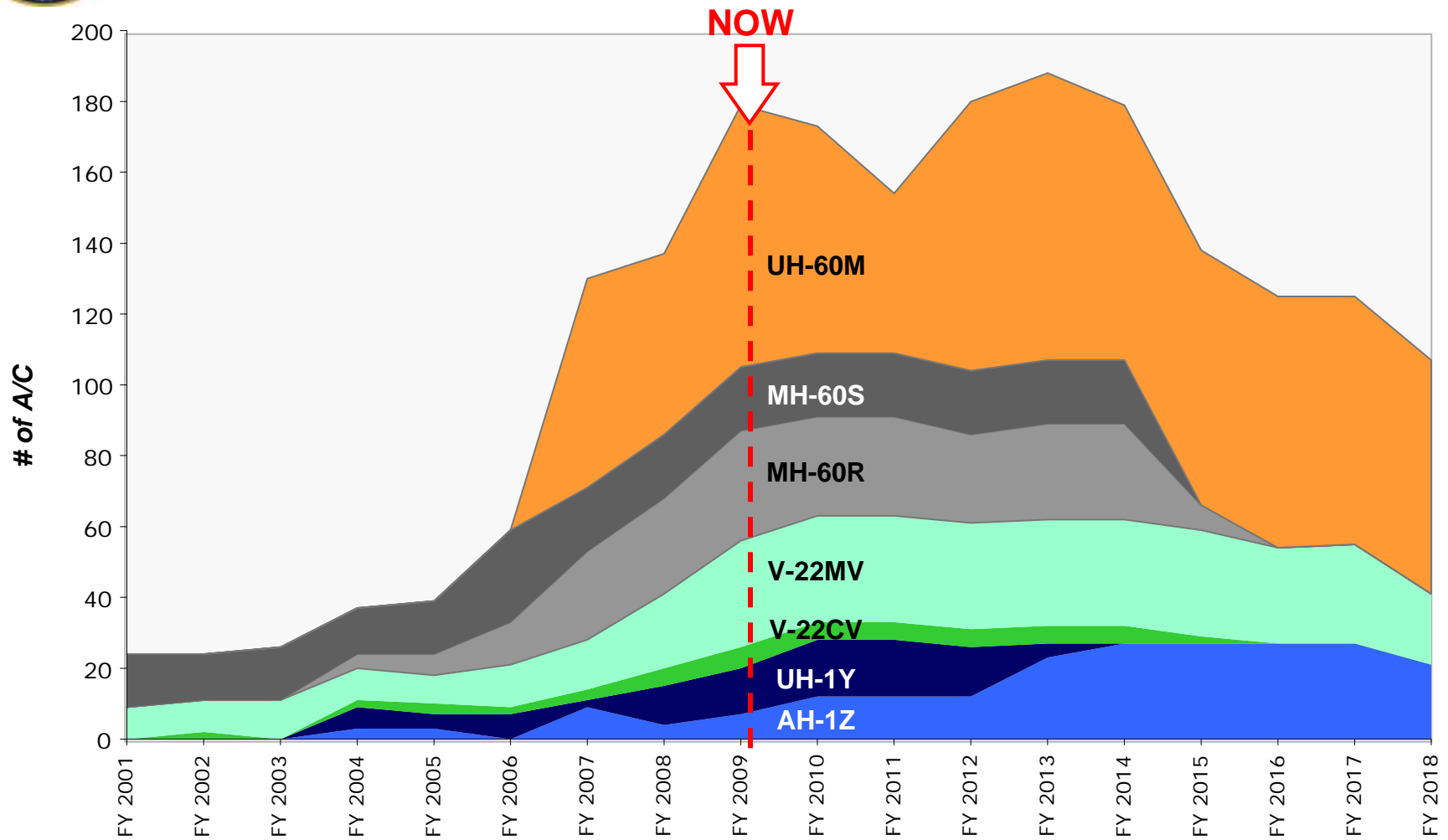
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- Comprise about half of DoD manned aircraft:
  - Army: 66%; Marines: 15%; Navy: 15%; USAF: 4%
  - Slight increase projected
- Aircraft age:
  - New models starting to field
  - Most of inventory between 10 and 20 years old
  - Oldest aircraft 25-40 years old
- Breakdown by function/missions:
  - 60% medium / utility
  - 25% attack and reconnaissance
  - 15% heavy lift / cargo





# Major Production Ramps Are Underway





# Historical Perspective: DoD Rotary Wing Aircraft Origins

## New Starts

XC-142  
X-22  
CH-47A  
CH-46A  
CH-53A  
AH-1G  
AH-16A

XH-59  
XV-15  
AH-64A  
UH-60A  
XC-162A

Impact of  
Increasing  
Cost &  
Complexity

MV-22A

RAH-66A

✗ Cancelled  
\* COTS

- 1960s

1970s

1980s

1990s

2000s

CH-47B/C  
CH-53D  
AH-1J

CH-47D  
CH-46E  
CH-53E  
AH-1S/F  
AH-1T

OH-58D  
UH-60L  
MH-47E  
MH-60K  
AH-1W

CH-47F  
AH-64D  
UH-1Y  
AH-1Z  
MH-60S

VH-71A  
ARH-60A \*  
UH-72A \*  
MH-47G  
AH-64D BL III  
UH-60M  
CH-53K  
CS-12R-X  
ARH (again)

## Derivative Mods & Remans

Impact of  
Budget  
Constraints

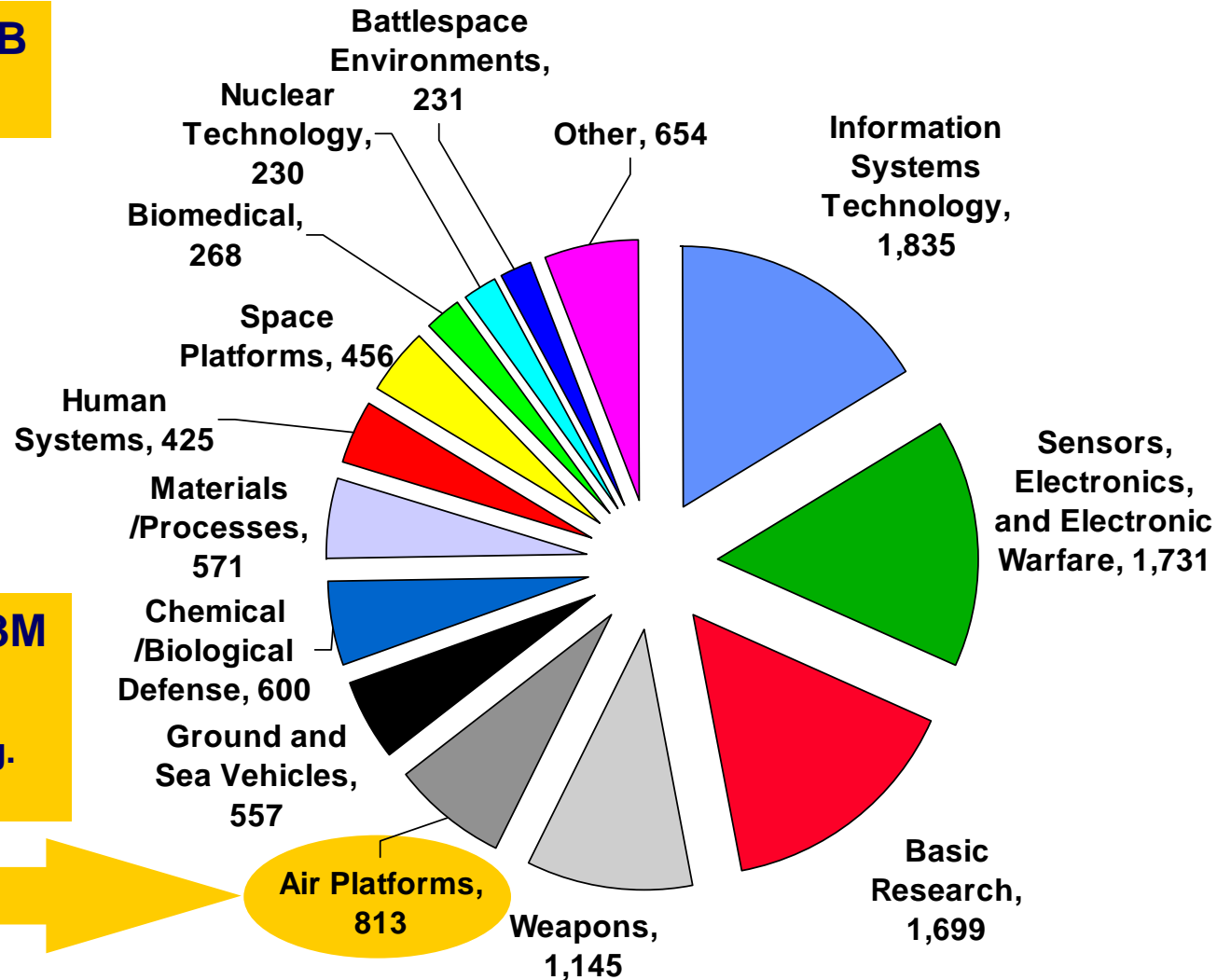


# FY09 President's Budget S&T Program (BA 1-3)

## Defense Technology Area Funding (\$M)

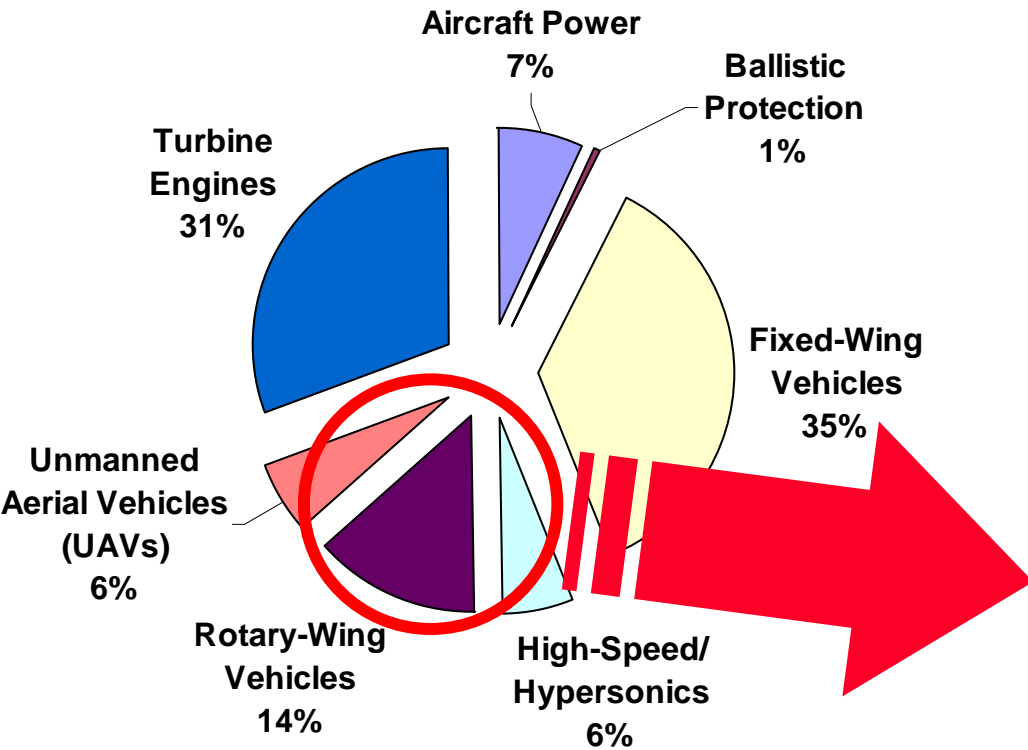
- Total FY09 S&T \$11.48B
- 2.22% of DoD Funding

- Air Platforms S&T \$813M
  - 7.1% of DoD S&T
- (Not including related areas, e.g. electronics, materials, etc.)



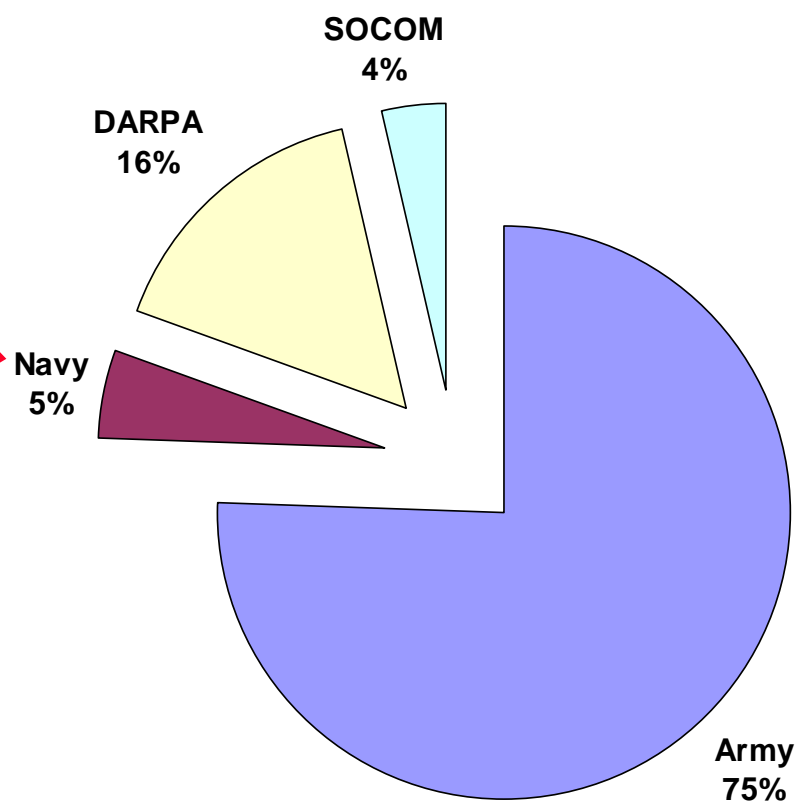


# FY09 Air Platforms and Rotary Wing Vehicle S&T Budgets



**Air Platforms S&T**  
**By Technology Sub-Area**

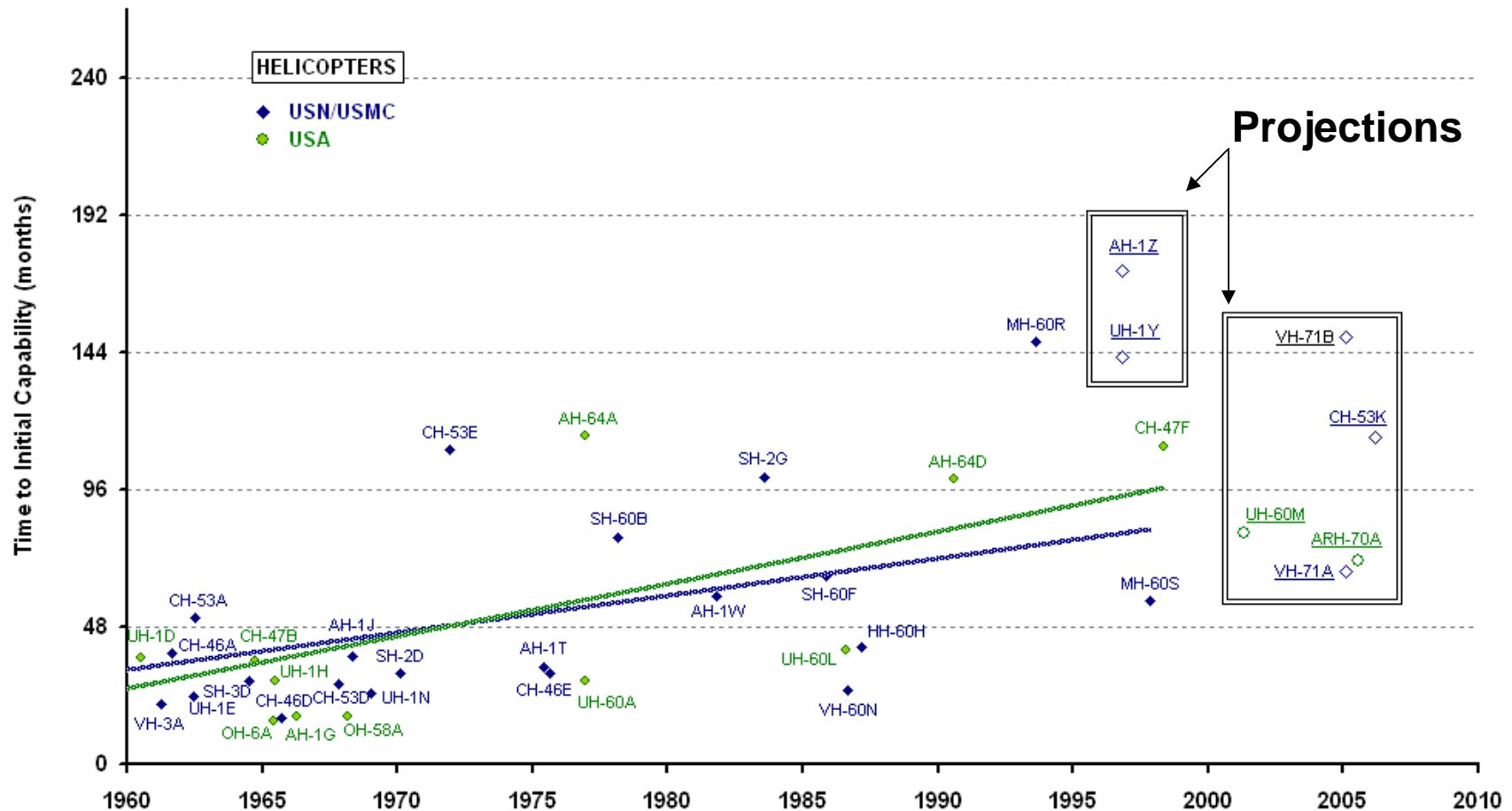
**Rotary Wing Vehicle S&T**  
**~\$110M in FY09 PBR**  
**(Does not include propulsion)**







# Development Cycle Time for Helicopters

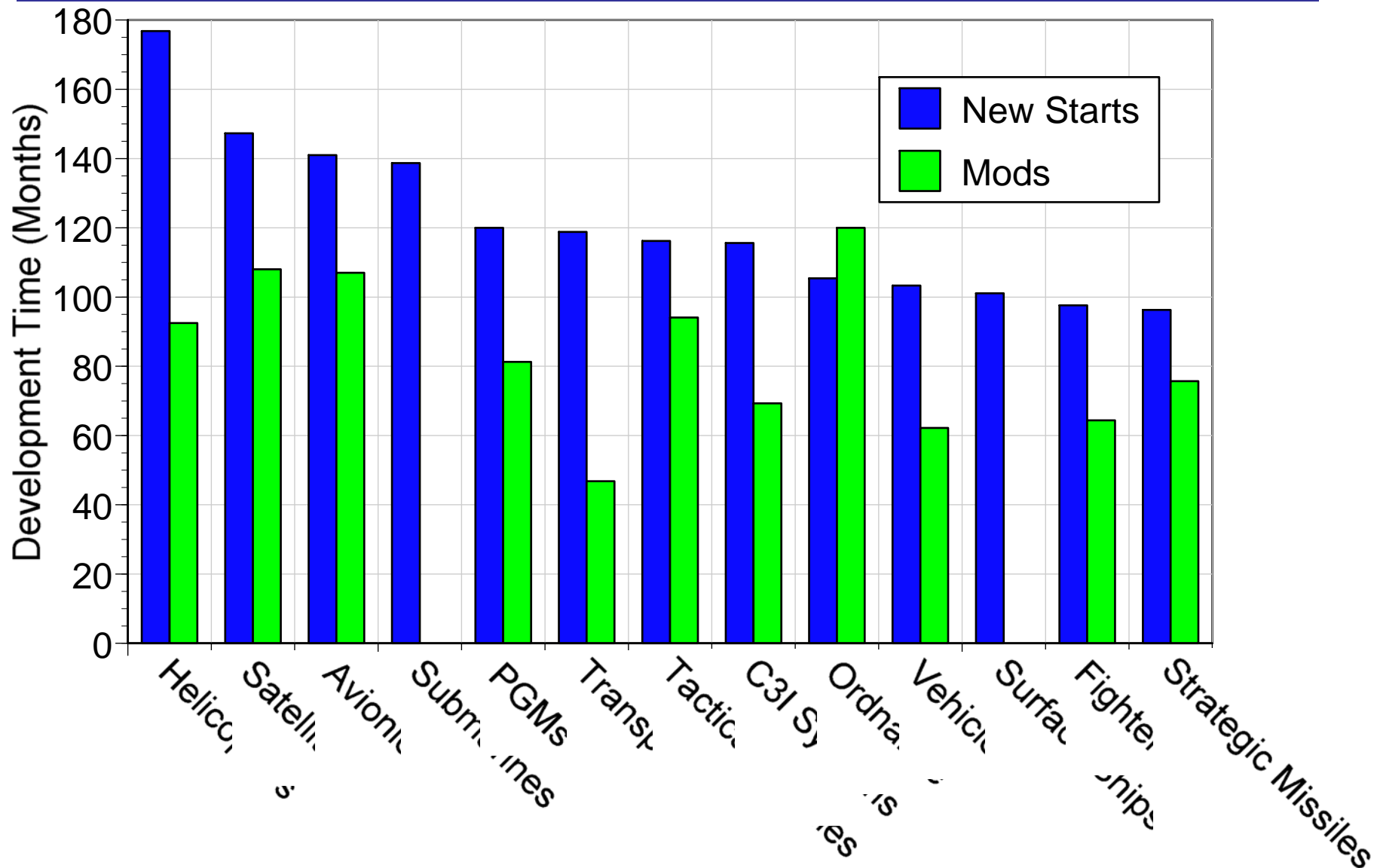


**Overall Development Time Takes about 3 Times Longer Now Than in the 60s**

NOTE: REGRESSIONS ARE A LINEAR FIT



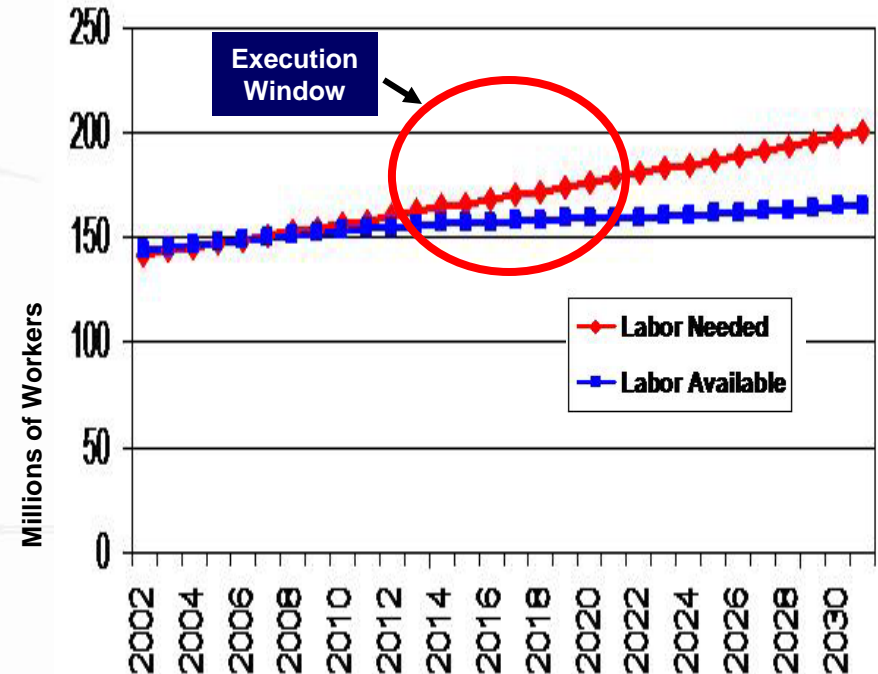
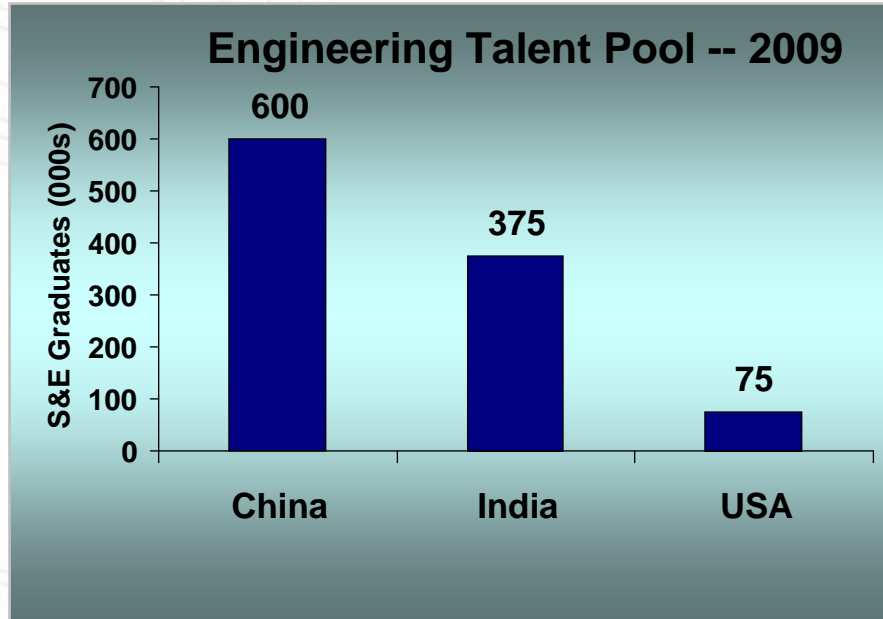
# Average Development Time by System Type



Source: OSD/USAF Study



# Resources - People



- **Aerospace Industries face acute shortages of skilled workers in the future**
- **No active US rotorcraft RDT&E after Apache Blk III and CH-53K**
- **Talent at home will be shrinking – but will be expanding globally**
  - *Void in experience & knowledge*
  - *Qualified labor will be in high demand and hard to attract*
  - *Most future post graduate students will be overseas*
- **Global industry trends will impact defense contractors and their supply chains**



# Diagnosis: Industry Provides What DoD Wants

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- DoD's rotary wing "portfolio": stable inventory
  - investment dominated by production and sustainment
  - production capacity limited by decreasing supply base
  - mistakenly viewed as readily-available, low-value commodities
  - poor credibility due to recurring acquisition failures
  - rotary wing programs relatively low within Services' priorities
- Industry's military business base: stagnant
  - stable oligopoly with business vice aerospace goals
  - sustaining DoD's inventory is best profit; only growth area
  - inventory replacement comprises extensive modifications to legacy designs
  - development programs are limited, derivative-designs; no new designs; little new technology
- Major industry initiatives unlikely without DoD investment





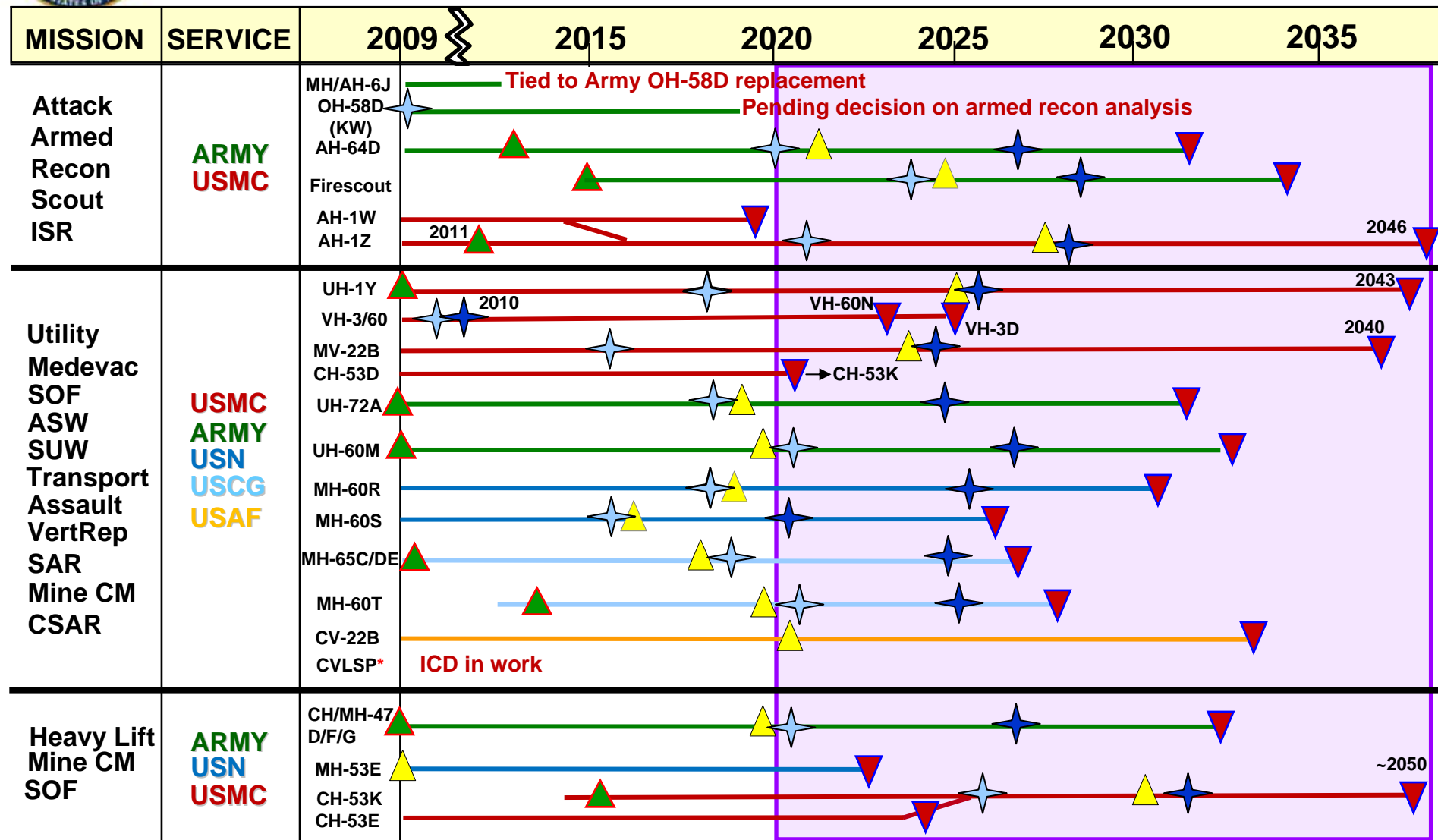
# Diagnosis (continued)

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- DoD's future "demand signal" unclear
  - no new-starts within FYDP (VXX? CVLSP? CSAR-X? AAS?)
  - technology base unable to support leap-ahead possibilities
  - OSD and Services' S&T interests fragmented
- Reality not consistent with common perception that vertical lift aircraft are: easy, cheap, and readily available, i.e. a commodity
- Acquisition failures undermine credibility of sector

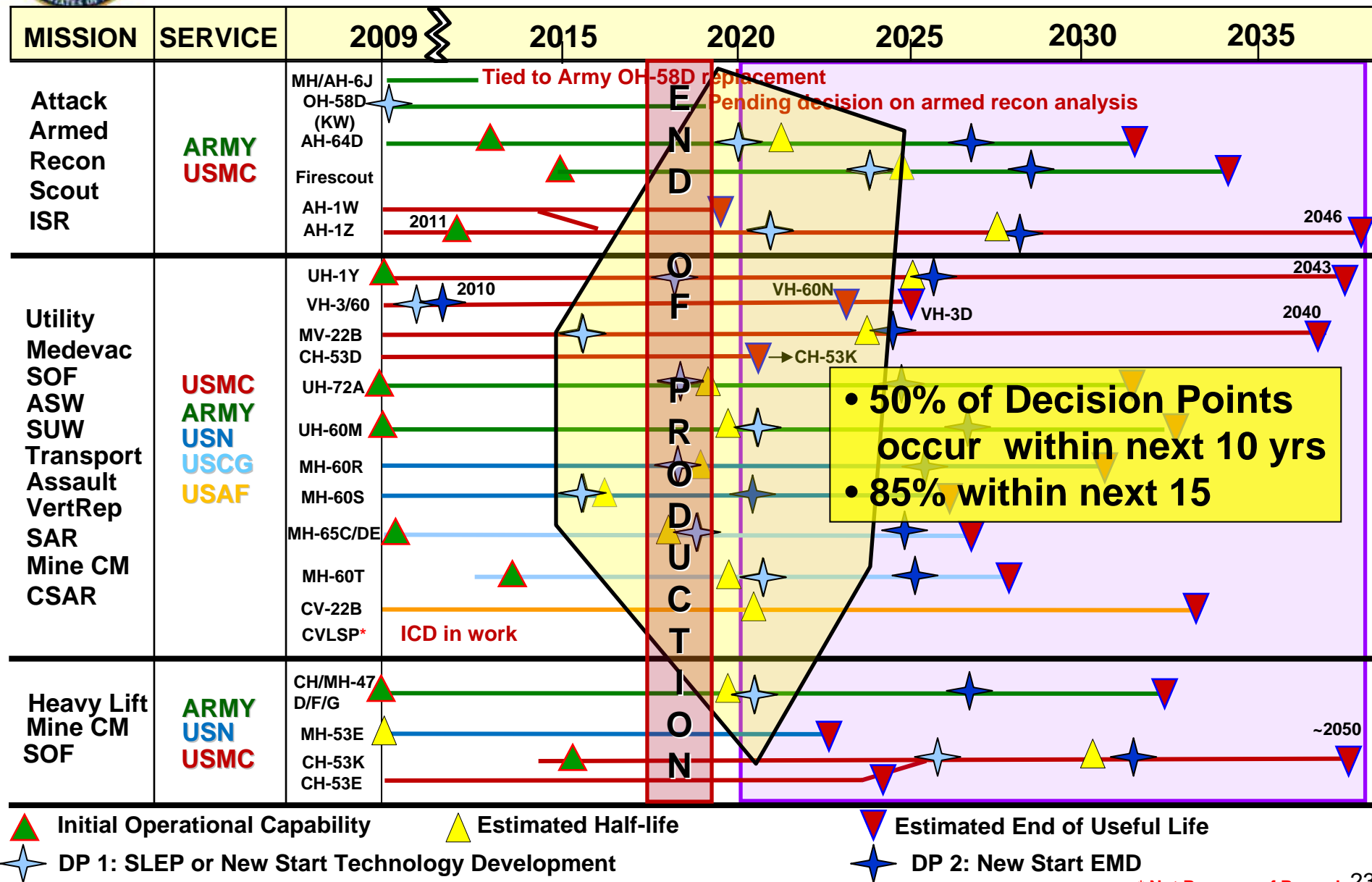


# Decision-oriented approach to Capability Choices, Programming Options, and Acquisition Alternatives





# Decision-oriented approach to Capability Choices, Programming Options, and Acquisition Alternatives





# Prognosis

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- Military demand implies little inventory growth.
- Replacement and increased capability appear to be the future challenges that would stimulate growth:
  - More production capacity than demand; potential consolidation?
  - Aging workforce; no “noble work;” what attracts new talent?
  - Bid protests are incentivized by rare, competitive opportunities
- Supply chain already critical
- Aging workforce; no “magic” in stable situation to attract imagination / new talent
- Preserving critical engineering skills will increase production overhead costs
- US technological leadership in doubt
- Congressional oversight or “reform” efforts will not provide the solution





# Is There an Imperative ?

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- Avoidable loss of life and equipment results from continued acceptance of marginal safety, survivability performance (Mindset: “rotorcraft operate in inherently dangerous environments”)
- No alternatives to current acquisition programs for DAE
- No government “demand” for new concepts that are a lead-time away
- O&S cost growth of present inventory remains unchecked
- For industry:
  - production programs end about 2018-2020
  - eroding infrastructure and engineering expertise
  - limited R&D alternatives for transformation opportunities, new business, or technology upgrades



# Prior Vertical Lift Aviation Studies

- 2000 Overarching Rotorcraft Commonality Assessment
- 2001 Non-Fixed Wing Aviation Study
- The Vertical Look Industrial Base: Outlook 2004-2014
- 2005 Aerospace Industries Association; Rotary Wing Revitalization Project
- 2005 ASB Future Force Aerial Systems Capabilities
- 2005, 2007 Annual Industrial Capabilities Report to Congress 2006 Joint Vertical Aircraft Task Force
- 2006 DCMA Helicopter Industrial Base Management Capability Survey
- 2006 DSB Study on Seabasing
- 2007 DSB Study – Future Need for VTOL/STOL Aircraft
- 2008 Joint Heavy Lift ICD



# Current Vertical Lift Studies and Activities

- Army Aviation Ops Capabilities Based Assessment
- Army Joint Multi-Role Study
- Navy Joint Multi-Role Study
- Naval Aviation Center Rotorcraft Aviation (NACRA)
- Army/DARPA Study on Rotary Wing Aviation
- Analyses of Alternatives for: Armed Scout Helicopter, Presidential Helicopter, Combat Search and Rescue Helicopter
- Capabilities Documents for Common Vertical Lift Support Platform and Joint Future Theater Lift
- Congressionally-funded efforts: Joint Heavy Lift, Vectored Thrust Ducted Propeller, and others
- DDR&E Helicopter Survivability Task Force I and II
- Future Vertical Lift Initiative (Congressional Reports)



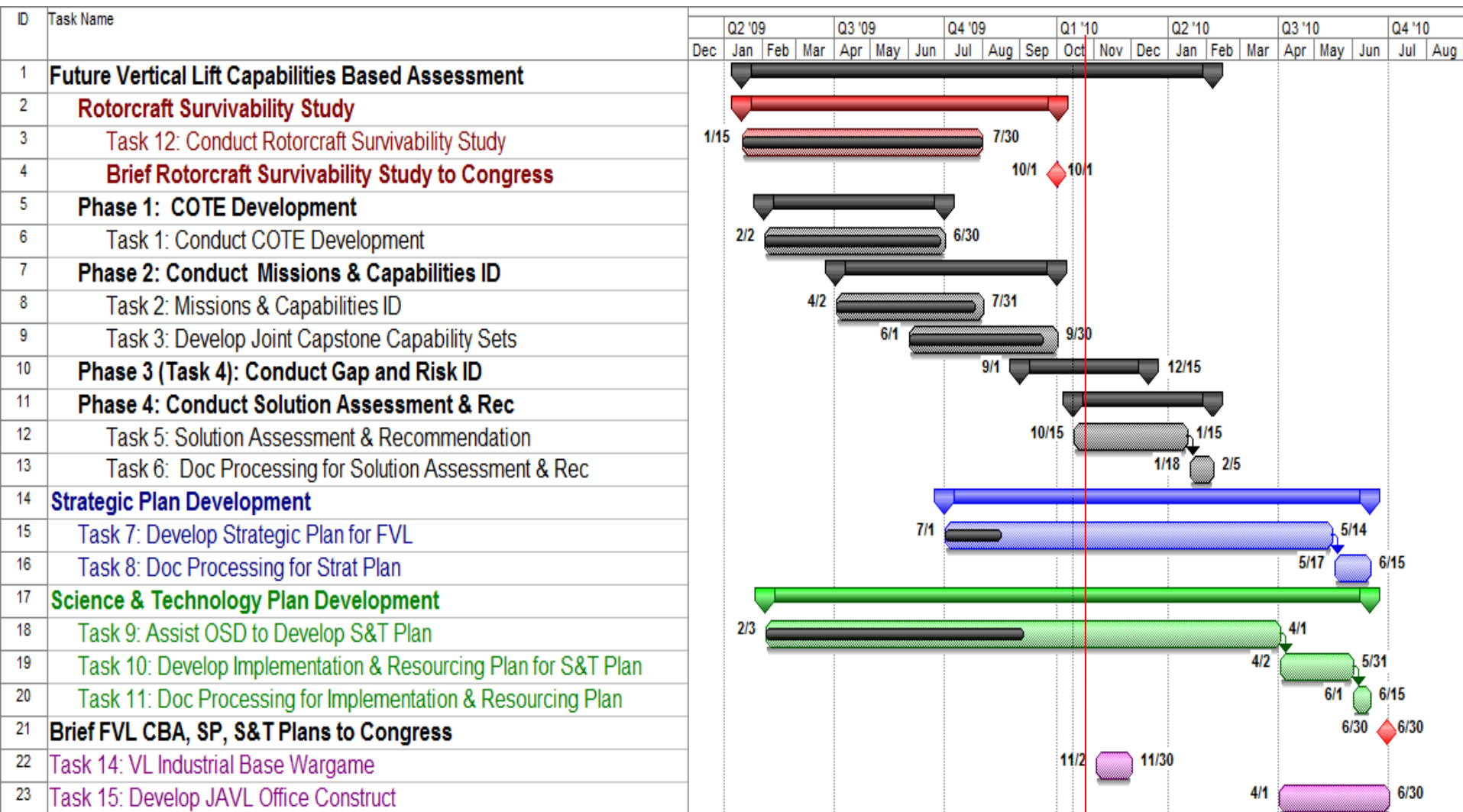
# Congressional Language

- Sec 255 of the 2009 NDAA: Capabilities Based Assessment to Outline a Joint Approach for Future Development of Vertical Lift Aircraft and Rotorcraft

- CBA {
- The Secretary and Chairman shall submit to the Congressional defense committees a report on the assessment under subsection (a) (Capabilities based assessment). The report shall include:
    - S&T Plan {
      - 1) **technology roadmap** that addresses critical technologies required for future development
      - 2) detailed **science and technology investment and implementation plan** and an identification of the resources required to implement such a plan
    - Strat Plan {
      - 3) **strategic plan that formalizes the strategic vision of DOD** for the next generation of vertical lift aircraft and rotorcraft, establishes Joint requirements for the next generation, and emphasizes development of common Service requirements
    - Office Plan {
      - 4) **detailed plan to establish a Joint Vertical Lift/Rotorcraft Office** based on lessons learned from the Joint Advanced Strike Technology Office



# FVL Detailed Project Plan



The background of the slide is a collage of various military helicopter operations. It includes images of helicopters on the ground, in flight, and performing rescue or transport missions. There are also silhouettes of people in the foreground, suggesting a public display or a presentation. The central text is overlaid on a semi-transparent blue rectangular area.

# Proposal for The Future -- A Government and Industry Partnership





# Proposal: Government and Industry Partnership

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Establish a formal, long-term (~20 year) mechanism to facilitate teaming, networking, planning, and technology development

-- a means to an end!

For the Government: OSD-led; broad membership including all Services and cognizant functional organizations; open to NASA and the Coast Guard

For Industry: an open consortium including traditional rotary wing industry, non-traditional contractors, academia, and associations

For the Nation: a forum to establish U.S. leadership in the advancement of vertical lift technologies, and in the development and production of vertical lift aircraft.

How: by establishing a simple contracting relationship with a single U.S. consortium using 10 USC 2371, Other Transaction Authority



# Questions ?





# BREAK

**Try this with a UAS or a JSF!!**



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# Partnering with the DoD – The Consortium Construct Legal Overview

Presented by  
Denise C. Scott  
Chief, RDECOM-ARDEC Legal  
Picatinny Arsenal, NJ

# Concept of Operations

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- ◆ Companion Other Transaction Agreement (OTA) and Consortium Member Agreement (CMA)
  - Industry Day(s)
  - Letter of Intent
  - Fully executed CMA first
  - Sole source OTA executed with consortium
- ◆ CMA governs dealings among industry/academia
  - USG is not a party to the CMA
  - CMA mirrors OTA but is separate instrument that also includes non-OTA terms and conditions
  - Membership is Consortium issue

# WHAT IS AN OTHER TRANSACTION (OT)?

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- ◆ A legally binding instrument (contract)
- ◆ Defined by what it is NOT
  - Not **procurement** contract/grant/cooperative agree't
  - For performing basic, applied, advanced research and development (**Research OT/10 USC 2371**) OR
  - For prototype projects that are directly relevant to weapons or weapon systems proposed to be acquired or developed by the DoD (**Prototype OT/Section 845 OT**)



# OTHER TRANSACTIONS (OT'S)

## PROTOTYPE PROJECTS

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- ◆ Authority: Section 845 of National Defense Authorization Act of 1994(PL 103-160), as amended by Section 804 of 1997 National Defense Authorization Act (PL104-201)
- ◆ Must be at least one nontraditional defense contractor participating to a significant extent **OR**
- ◆ Mandatory One Third Cost Sharing for Traditional Defense Contractor
  - may be waived by senior procurement executive for the agency if exceptional circumstances justify the use of a transaction that provides for innovative business arrangements or structures that would not be feasible or appropriate under a procurement contract.
- ◆ Section 845 Other Transaction Guide for Prototype Projects
  - Under Secretary of Defense for Acquisition, Logistics & Technology, 21 December 2000
  - 32 CFR part 3

# Definition of Non-Traditional Contractor

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- ◆ Is a business unit that has not, for a period of at least one year prior to the date of the OT agreement, entered into or performed on:
  - (1) any procurement contract that is subject to full coverage under the cost accounting standards, OR
  - (2) any FAR based procurement contract in excess of \$500,000 to carry out prototype projects or to perform basic, applied or advanced research

# Definition of Non-Traditional Contractor (cont'd)

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## ◆ What is a Business Unit?

- Any *segment* of an Organization, or an entire business organization that is not divided into segments
- A segment is one or more divisions, product departments, plants or other subdivisions of an organization reporting directly to a home office, usually identified with responsibility for profit and/or producing a product or service

# Significant Participation of a Non-Traditional

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- ◆ Supplying new key technology or products
- ◆ Accomplishing a significant amount of the effort
- ◆ Causing a material reduction in the cost or schedule or increase in performance.

# OTHER TRANSACTIONS (OT's)

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- ◆ What does not apply?
  - Competition in Contracting Act
  - Bayh-Dole & Rights in Technical Data
  - Truth in Negotiations Act
  - Contract Disputes Act
  - Procurement Protest System
  - Procurement Integrity Act
  - Grants and Agreements Regs (DODGARS)
  - See DOD Prototype Guide, Appendix 1

# WHAT DOES AN OT DO FOR YOU?

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- ◆ Relief from FAR and supplemental regulations
  - FAR, DFAR, AFAR not applicable
- ◆ Flexibility to use “best practices”
  - Costs reasonable
  - Schedule & requirements enforceable
    - » Payment arrangement promote on time performance
- ◆ Competition only to maximum extent practicable (CICA not applicable)



# WHAT DOES AN OT DO FOR YOU?

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## ◆ Negotiable/Flexible

- Don't feel constrained by previous USG contract practices and conventions.
- Changes
  - » No automatic unilateral changes or equitable adjustment
- Termination
  - » No automatic Termination for Convenience or Default
- Flexible payment provisions (**payable milestones**)
- Intellectual Property negotiable

# WHAT DOES AN OT DO FOR YOU?

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## ◆ Costs

- No mandatory cost accounting standards/reporting
- No certified cost and pricing data
- Commercial standards
- No DCAA oversight (but mandatory Comptroller General Access under certain circumstances if over \$5M) 32 CFR 3.7

## ◆ Management Structure

- Prime/sub relationship not required (teaming)
- Subcontracting
  - » No mandatory clause flowdowns

# PAYABLE MILESTONES

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- ◆ Proposed by you to fit your approach
  - Observable technical achievements or events
  - Recognition of completion by USG Tech/PM
- ◆ Cost share may be different milestone to milestone
- ◆ Two Types
  - Firm Fixed Price
    - » Not adjusted for actual costs
  - Cost Reimbursable
    - » Adjusted for actual costs based on awardees cost records
    - » Need accounting system that accumulates and reports costs consistently within the appropriate business unit.

# COST SHARING DEFINED

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- ◆ Resources expended by the award recipients on the proposed project SOW and subject to the direction of the project management, i.e. costs a reasonable person would incur (necessary to) carrying out project SOW.
- ◆ Cost Sharing does NOT involve Funds Directly to USG
- ◆ Two Types of Cost Sharing
  - **Cash:** Outlays of funds to perform the OT project
    - » Includes labor, materials, new equipment, subcontractor effort
    - » Sources include **new IR&D funds**, profit or fee from another contract, overhead or capital equipment expense pool
  - **In-Kind:** Reasonable value of equipment, materials or other property used in performance of OT work

# COST SHARING (cont'd)

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- ◆ IR&D funds can be utilized as cost sharing
  - **New** IR&D funds offered to be spent on the project SOW and subject to the direction of the project management.
  - Parallel research that might be related to the project but will not be part of the SOW or subject to the direction of the project management is **NOT** considered cost share.
  - Will not count cost of prior research as cost share.

# COST SHARING (cont'd)

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- Cost share may be different among partners
- Cost share may be different milestone to milestone
- Need some financial reporting that provides appropriate visibility into expenditures of USG v. private funds
- Agreement may provide for adjustment of investments if the other party is not able to make its required investment. Trigger and procedures for adjustment is negotiable.
- Sometimes, costs incurred by awardee after beginning of negotiations but before OTA award may be considered.



# COST SHARING (cont'd)

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## ◆ What is NOT Acceptable Cost Share

- Sunk costs or costs incurred prior to project
- Foregone fees, profits, G&A.
- Bid and Proposal costs.
- Value claimed for existing intellectual property
- Parallel or prior research.
- Cash or in-kind whose availability is not clearly and convincingly demonstrated
  - » Burden of proof on proposer

# OT LIMITATIONS

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- ◆ Criminal Law (False claims/statements) applies
- ◆ Federal Fiscal Law applies
- ◆ Comp Gen access to records required
- ◆ Laws of general applicability (e.g., Title VI, Civil Rights Act)
- ◆ No supporting regime of commercial law
  - no UCC to fill in gaps
  - freedom of contract/ no regulatory framework

# CONSORTIUM MEMBER AGREEMENT (CMA)

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- ◆ A set of rules and procedures which govern the activities and relationships of the industry participants to the Agreement.
  - Allocates risks, responsibilities, rewards
  - Establishes and maintains relationship
  - Someone Firmly in charge/ focus for USG
- ◆ Not part of the OT Agreement
  - Referenced in the OT
  - USG not a member or signatory

# CMA

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## ◆ Unique Industry Issues

- National Cooperative Research and Production Act (15 USC 4301 et seq) (NCRPA)
  - » Attempts to clarify how antitrust laws apply to consortia and encourages joint R&D by providing some protection to participants
- Written notice to DOJ and FTC required
- Federal Register Notice required
- Protects industry
  - » Limits recovery of anti-trust plaintiffs to actual damages

## ◆ Elements of Successful Consortia

- Survey of 455 CEOs of Electronics Companies
- Most Essential & Important factors Identified
  - » **Partner Selection**
  - » **Senior Management Involvement/commitment**
  - » Clearly understood rules
  - » Communication among partners
  - » Clearly defined objectives
  - » Someone firmly in charge who is the focus for USG
  - » USG should facilitate the relationship through Industry Day and Draft Solicitation

# CMA

## Best Practices in Terms & Conditions

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- ◆ Management Committee Established
  - Empowered to determine ALL issues on behalf of consortium
    - » Policy, business, financial, legal, technical
  - Empowered to represent the consortium in transacting business with the USG
  - Voting members from each party attends
    - » USG party may attend
    - » Others attend with permission of committee

## Best Practices in Terms & Conditions

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- ◆ Management Committee (cont'd)
  - Majority Rule NOT Unanimous vote
    - » Simple Majority for some issues
    - » Larger majority for stated significant issues
    - » Establish a Quorum rule
    - » Decide if different members have different voting rights (or none at all) based on contributions to effort



# CMA

## Best Practices in Terms & Conditions

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- ◆ Establish Membership Process
  - Procedure to admit new members
  - Procedure to terminate membership
    - » Voluntarily at request of party
    - » Involuntary termination for cause (breach)
    - » Funding distribution upon exit
    - » Disposition of intellectual property upon exit
- ◆ Establish Publication Guidelines
- ◆ Establish Dispute Resolution Process

# CMA

## Consortium Intellectual Property

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- ◆ How will rights in Consortium Intellectual Property be assigned, divided and licensed?
- ◆ How will proprietary information be handled?
  - Separate “Proprietary Information Exchange Agreement” to protect proprietary data
  - Process for publishing data
- ◆ How will Patents be handled?
  - Reporting of inventions, prosecution, maintenance, joint patents

# Lessons Learned

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- ◆ Not a grant type effort
- ◆ Binding contract that needs clear terms and conditions
- ◆ Remember the constraints you do not have
- ◆ It works if all members stay involved
- ◆ Need single voice to USG



# Proposed Way Forward- Contracting Overview

Briefing by  
Steven M. Talmadge  
Center Director, Emerging Technologies,  
Army Contracting Command,  
Picatinny Arsenal



# Contracting Approach



- Two phased OTA contemplated for Program Execution
  - Phase I target award January 2010
    - Initial Program Effort
    - Cost Sharing anticipated
  - Phase II target award TBD
    - Request for Project Proposals
    - Define framework for Annual Project Definition/Selection



# Consortium Formation

- Consortium Formation and CMA Development is Industry Responsibility
  - Gov't cannot be party to the CMA
  - Gov't can provide advisory comment for discussion only after Consortium Letter of Intent is submitted
    - Must address Consortium member status (i.e. Nontraditional, Traditional, Academia) and include Consortium technical capabilities
  - CMA provisions cannot conflict with terms and conditions of OTA/Documents must be consistent



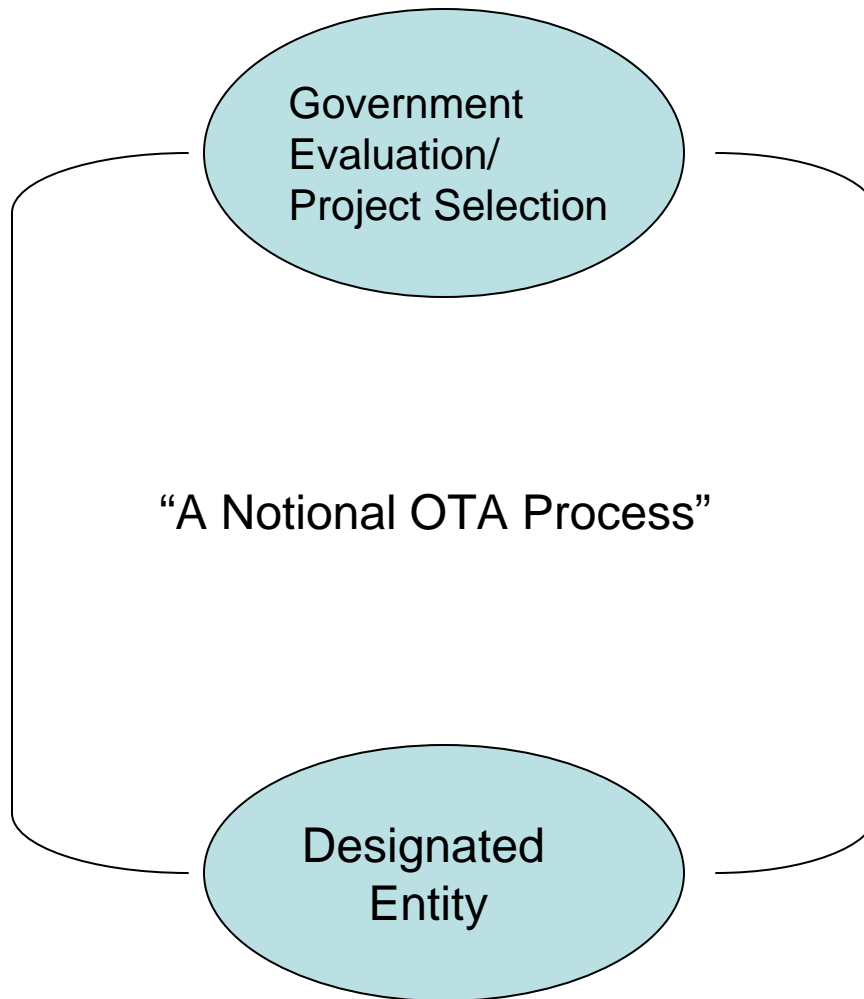
# Consortium Approach

- Single Point of Entry Concept recommended
  - Single entity operates as agent for Consortium
  - Single face to Gov't
- Consortium has flexibility in construct/development of interface with Gov't; e.g.
  - Contracted Agent
  - Lead Consortium Member
  - Consortium Member Committee
- Can develop any other type of concept for consideration

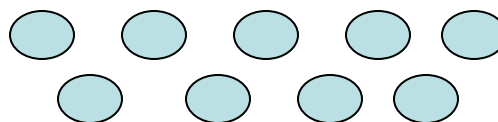




Selected  
Projects funded  
and  
implemented  
under OTA



Annual Project  
Plan submitted  
as OTA  
Deliverable



Consortium Members



# Aggressive timeline

- Proposed Milestone Schedule
  - Submission of formal Letter of Intent
    - Identifies proposal membership and construct of Consortium
    - Allows conduct of advisory discussions with Government on CMA
  - Submission of Consortium Membership Agreement to the Government for Review
  - CMA is in place and Additional Consortium Documents Submitted to Government
  - Other Transaction Agreement is Executed
- 6 November 2009
- 7 December 2009
- 23 December 2009
- 15 January 2010



# Key Contact Information for Army Contracting Command, Picatinny Arsenal



- Steven M. Talmadge (973) 724-2754  
Center Director, Emerging Technologies
- Marion Doyle (973) 724-7465  
Agreements Officer
- Morgan Ross (973) 724-3504  
Agreements Specialist



# Conclusion

- All reference material, slides and documentation samples will be posted at the following address:  
<http://procnet.pica.army.mil/dbi/download/GoGetSpecialNotice.cfm?SpecialNum=W15QKN-09-Z-0214>
- Questions and Answers

## VLC STEERING COMMITTEE

AgustaWestland North America

American Helicopter Society  
International

Bell Helicopter Textron

The Boeing Company

EADS North America

Lockheed Martin Corporation

Sikorsky Aircraft Corporation



## ***Interested Organizations***

The Vertical Lift Consortium (VLC) Steering Committee is interested in establishing contact with organizations having a significant interest in consortium membership and our proposed partnership with the Department of Defense

For more information please visit:

***[www.iVertical-Lift.org](http://www.iVertical-Lift.org)***