



**WRIGHT  
PATTERSON**

Air Force Base, Ohio  
The Birthplace,  
Home and Future  
of Aerospace



**Aeronautical Systems Center  
Revitalization of Systems  
Engineering**



**Mr. Dennis J. Cassette  
Director, Engineering Directorate  
Aeronautical Systems Center**





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# Outline



*Rapidly delivering war-winning capability*

- **Recent History**
- **ASC Organization**
- **PEO Emphasis**
- **Implementation**
- **Systems Engineering Tool Set**
- **Summary**



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# Recent History



*Rapidly delivering war-winning capability*

- **Policy:**



- **OSD Memo, 20 Feb 2004, *Policy for Systems Engineering***
  - **SAF/AQ Policy Memo, 9 April 2003, *Incentivizing Contractors for Better Systems Engineering***
  - **SAF/AQ Policy Memo, 7 Jan 2004, *Revitalizing Air Force and Industry Systems Engineering***
- **USAF Conference on Advancing Systems Engineering, 1-2 Sep 2004**

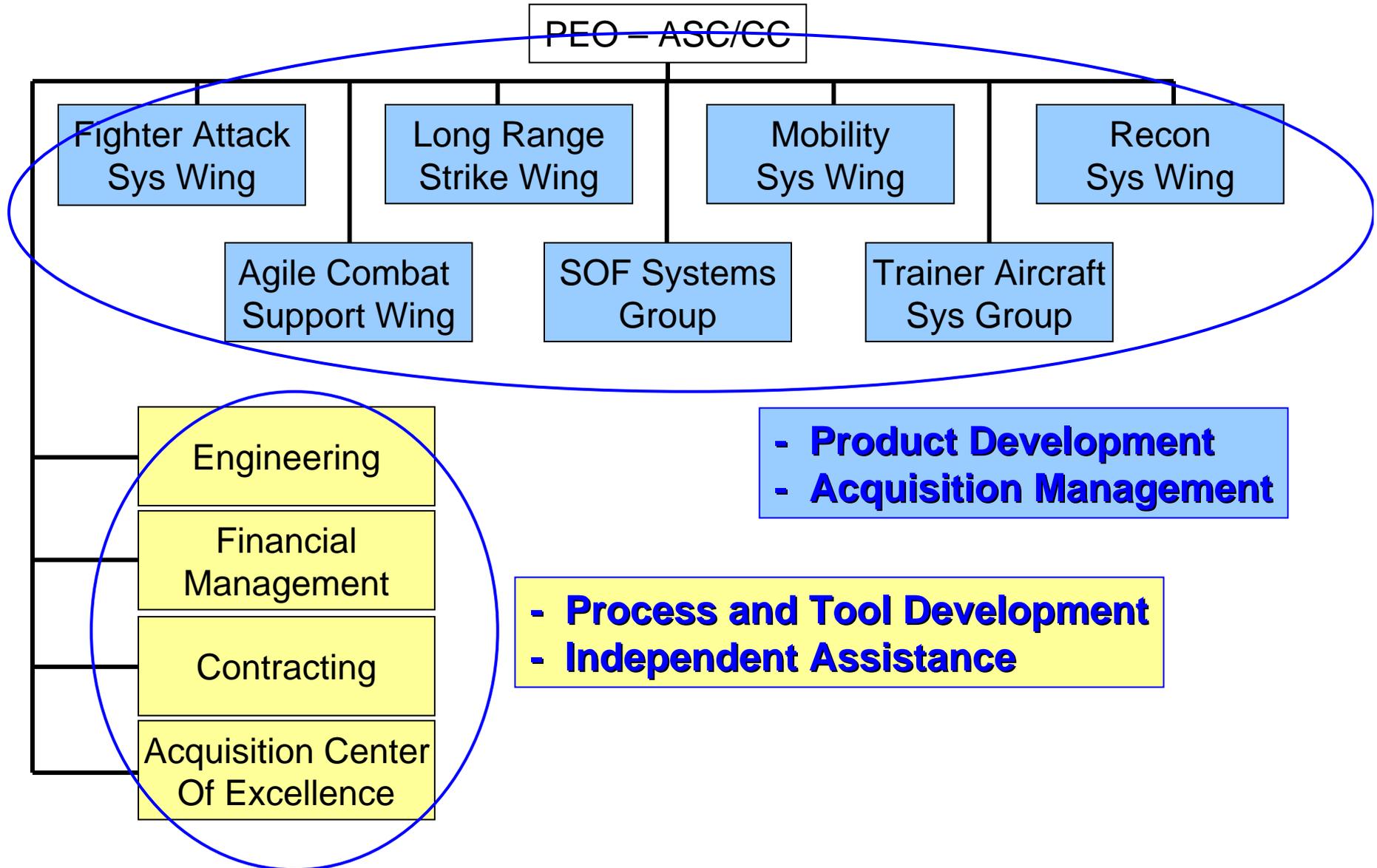


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# ASC Organization



*Rapidly delivering war-winning capability*





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# PEO Emphasis



*Rapidly delivering war-winning capability*

- Increased SE content in programs
  - Program Systems Engineering Plan (SEP)
    - Foundation for contractual effort(s)
  - Event and criteria based management (technical reviews, readiness for DT, OT, production)
  - Airworthiness plan
  - Design integrity and product quality standards
- Program health assessment with metrics
  - Contract incentives and awards
  - Non-Advocate & independent airworthiness reviews
  - Life management considerations, e.g., cost effective change

**PEO Policy Letter 04-024, 4 Oct 04**



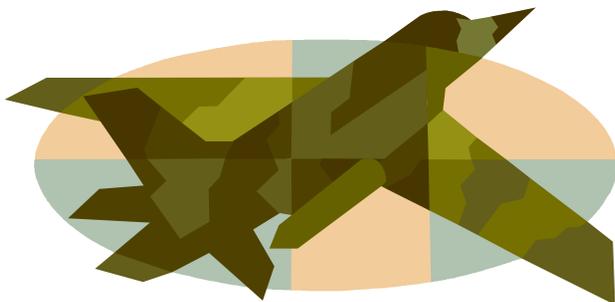
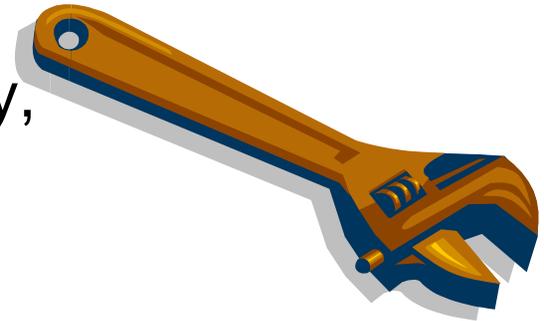
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# Implementation



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- SE Guides and MIL-STDs
  - Requirements, IMP/IMS, design integrity, software, manufacturing, OSS&E, etc.
  - Interim products deployed
    - Updates in progress
- Independent Airworthiness assistance
  - First flight readiness review
    - New development & major mods
  - Designated airworthiness expert review for higher risk items
  - Final airworthiness determination



**SE Tools centrally located on ASC/EN Web site**

- Home
- Org Info
- **SE Tool Set**
- Services
- Processes
- Initiatives
- Guides
- Division Info
- Career Dev
- Training
- Home Office



## Systems Engineering Tool Set Introduction

[Sec Wynne 20 Feb 2004 Policy Memo](#)

[Systems Engineering Tool Set](#)

[ASC/CC Policy Memo 4 Oct 2004](#)

[ASC EN Point of Contacts](#)

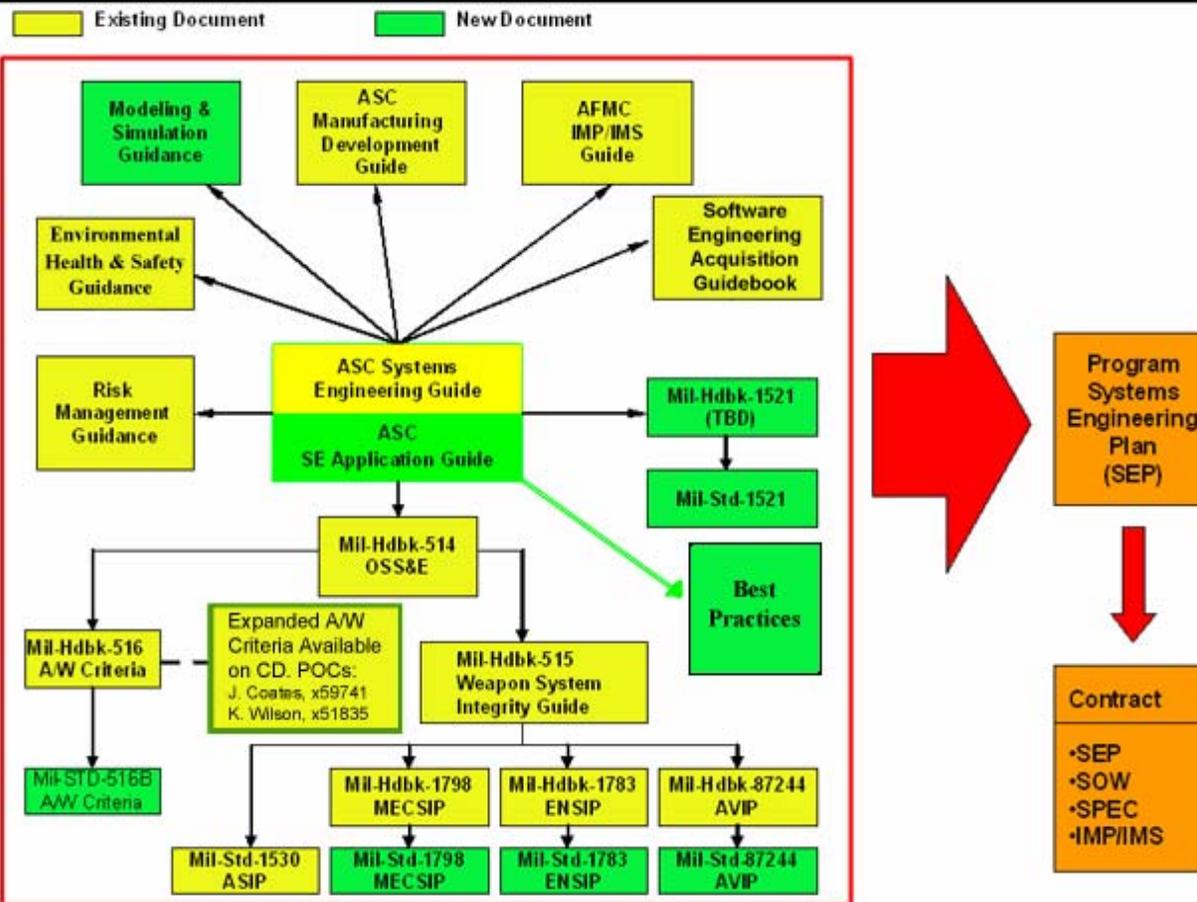
The acquisition of aeronautical weapon systems has a strong dependence on an effective systems engineering effort. Systems engineering, within the context of DoD acquisition policy, has evolved from a paradigm of "military standards based" to "performance based with industry owned processes". It continues to evolve, but nonetheless provides the essential discipline central to transitioning a concept into a product to meet a desired capability. This web page details the Aeronautical Systems Center's policy, as described in [ASC/CC Policy Memo 04-024, "PEO Guidance for Systems Engineering", 4 Oct 2004](#), and provides guidance and tools for systems engineering.

[Sec Wynne 20 Feb 2004 Policy Memo](#) – OSD recently issued new policy requiring that new acquisition efforts develop a program systems engineering plan (SEP) which must be approved by the program Milestone Decision Authority (MDA) and updated periodically at major program milestones. This is in addition to several SAF/AQ policy memos regarding required systems engineering activities for Air Force acquisition programs issued over the past two years.

**Converts EN Website to "one stop shopping"  
for SE guidance**

## Systems Engineering Tool Set

- Home
- Org Info
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# Summary



*Rapidly delivering war-winning capability*

- Systems Engineering is important element of acquisition life cycle management
- PEO Policy issued to provide
  - Consistent SE application,
  - Effective risk management
  - Problem prevention
- Tools and processes designed for ease of application and efficiency

**Strengthened Program Execution**

**Back up**



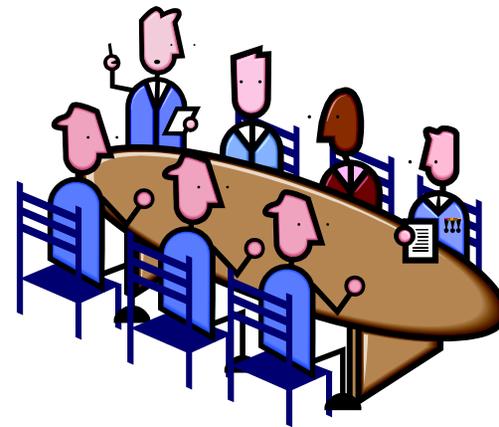
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# Airworthiness Board



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- Engineering Director – Chair
- SL's
  - Systems Engineering
  - Structures
  - Software
  - Propulsion
- Selected Wing DOE(s)
- ALC EN rep
- Test & Evaluation rep
- Tech Directors
  - Systems Engineering
  - Avionics
  - Flight Systems
  - Modeling & Simulation
  - Environmental



BACK