



# **Test and Evaluation Conference**

**26 March 2001**

**Defense Systems Management College  
Acquisition Policy Department**

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T&E Conf 26 Mar chart 1

# Evolution of Defense Acquisition Policy

- **1969 - DSARC established by DEPSECDEF Packard.**
- **1971 - DoD Directive 5000.1, “Acquisition of Major Defense Systems”.**
- **1975 - DoD Instruction 5000.2, “Decision Coordinating Paper and the DSARC”.**
- **1976 - OMB Circular A-109, “Major System Acquisitions”**
- **1977 - DoDD/DoDI 5000.1/2 revised to incl. OMB Cir A-109. DoDI 5000.2 becomes “Major Systems Acquisition Process”, implements 5000.1.**
- **1987 - Policies and procedures extended to “nonmajor” acquisition programs.**
- **1991 - DoD 5000.2-M issued to provide detailed formats for all documents. 5000.1/2 expanded to absorb over 60 other directives, instructions, and memoranda.**
- **1996 - DoD 5000.1 applies to all programs. DoDI 5000.2 replaced with DoD Regulation 5000.2, applies to major programs (mostly). DoD 5000.2-M eliminated. Major AIS programs included. Deskbook created. Components “empowered” for nonmajor programs.**
- **2000 - DoDI 5000.2 returns, implements revised DoDD 5000.1- both apply to all programs. Milestones/phases restructured. S&T becomes major emphasis.**
- **(TBD) 2001 - DoD 5000.2-R revised; still primarily, but not completely, major programs. “Interim 5000.2-R” issued on 4 Jan 2001.**



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T&E Conf 26 Mar chart 2

# DoD 5000 Series

## From This (March 1996)

- DoD Directive 5000.1
- DoD Regulation 5000.2-R



## To This

- DoD Directive 5000.1 (chg 1, 4 Jan 01)
- DoD Instruction 5000.2 (chg 1, 4 Jan 01)
- Interim 5000.2-R, 4 Jan 01

- 1996 DoD 5000.2-R cancelled
- *New DoD 5000.2-R pending*



## Status of DoD 5000.2-R

- Revision of DoD 5000.2-R lagging behind new DoDD 5000.1 and DoDI 5000.2
- Interim 5000.2-R, 4 Jan 01, released as *Attachment 1* to memo from USD(AT&L), ASD(C<sup>3</sup>I) & DOT&E
- Applies to MDAPs and MAISs and specifically where stated, to less-than-major programs
- Interim 5000.2-R contains about 90% of what is expected to be in final DoD 5000.2-R - expected no earlier than Apr 2001



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## Transition to the New 5000 Process

### “Grandfathering”

- **Programs/efforts not yet past Milestone II: shall apply new phases and milestones unless MDA says otherwise.**
- **Programs past Milestone II: shall not apply new milestones and phases unless MDA says otherwise.**
- **All programs/efforts, regardless of where they are in the old process will comply with all the new policies and procedures in DoDI 5000.2.**



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## Problems With Old Policy

- **Only addressed systems acquisition - not total acquisition system**
- **Treated evolutionary approaches and innovations as “non-traditional” excursions**
- **Endorsed “tailoring” but provides no amplifying guidance to assist acquisition strategy development**
- **Provided no firm decision criteria**

### Our process and practices:

- **Took too long and cost too much**
- **Were incompatible with modern technology cycles**



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## The New 5000 Process

- ***Multiple process paths*** - not just one way of entering acquisition process
- ***Evolutionary acquisition*** - based on *time-phased requirements* - preferred (but not only) approach
- **Minimum number of *mission-oriented KPPs* to facilitate *cost-performance trades***
- **Achieve *proven technology* and a *validated ORD*** -- before beginning systems-level development
- **Complete *full systems demonstration*** -- before committing to low-rate production
- **Use *market research* and *commercial products*** -- to increase competition

**Higher Performance, Lower Costs, More  
Rapid Deployment**





# The New 5000 Process Key Focus Areas

- **Deliver advanced technology to warfighters faster**
  - Rapid acquisition with demonstrated technology
  - Time-phased requirements and evolutionary development
  - Integrated test and evaluation
- **Reduce total ownership costs**
  - Cost as a requirement that drives design, procurement, and support
  - Increased competition

***“Improved performance (including quality) at lower cost.”***



## The New 5000 Process Key Focus Areas, continued...

- **More flexible process focused on interoperability, supportability, and affordability**
  - Integration of acquisition and logistics
  - Interoperability as a Key Performance Parameter
  - Improve software management
  - Emphasis on total system support and operational sustainment

***“Improved performance (including quality) at lower cost.”***



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T&E Conf 26 Mar chart 9

# The New 5000 Process

## What's New in DoDD 5000.1?

- **Achieving interoperability**
- **Rapid & effective transition from S&T to Products**
  - Time-phased requirements & communications with users
  - Commercial products, services & technologies
  - Performance based acquisition
- **Rapid & effective transition from acquisition to deployment & fielding**
  - Evolutionary acquisition
  - Integrated test & evaluation
  - Competition
  - Commitment to production



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# The New 5000 Process

## What's New in DoDD 5000.1?

Continued...

- **Integrated & Effective Operational Support**
  - Total systems approach
  - Logistics transformation
  - Protection of critical program information
- **Effective Management**
  - Tailoring
  - Cost & affordability
  - Program stability
  - Simulation based acquisition
  - Streamlined organizations & a professional workforce



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# The New 5000 Process What's New in DoDI 5000.2?

- **Three Major Activities; Four Phases; Eight Work Efforts**
- **Decision & Interim Progress Reviews**
- **Key capability enablers (Critical Pgm Info, Info Superiority, & Interoperability)**
- **Interoperability as Mandatory KPP**
- **Procurement of Services to satisfy mission need.**
- **Technological Opportunity Activities**
- **Independent Technology Assessments**



# The New 5000 Process

## What's New in DoDI 5000.2?

Continued...

- **Use of ATDs, ACTDs & Experiments**
- **Entrance Criteria**
- **Analysis of Multiple Concepts**
- **Technology Transition Fund**
- **Foreign Disclosure & Anti-Tampering**
- **Clinger-Cohen Compliance**
- **Preference for Allied Systems**
- **CIO Registration**
- **OIPT Leader Approval of TEMP**
- **Proof of Software Systems Maturity**



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# The New 5000 Process

## What's New in DoDI 5000.2?

Continued...

- **Evolutionary Acquisition & Time-Phased Requirements**
- **Evolutionary Sustainment**
- **Follow-on Blocks for Evolutionary Acq**
- **Pre-ACAT Technology Projects**
- **Report of Change in ACAT Level**
- **Written Charter for Program Managers**
- **Restricts PEO “other responsibilities”**
- **Application for Frequency Allocation**



# Evolutionary Acquisition Strategy (Block Upgrades)

- **Block 1: Initial deployment of usable increment of capability.**
- **Block 2 & subsequent blocks: Two approaches -**
  1. **ORD has firm requirement for each block. Each block is baselined, funded, developed, tested and produced using traditional methods.**
  2. **ORD defines block 1, but does not allocate to subsequent blocks remaining requirements to achieve full capability.**
    - **Sequential block upgrades to achieve full capability based on user experience with delivered system.**
    - **ORD updated lead-time away from each block, based on user understanding of delivered capability of previous block.**





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T&E Conf 26 Mar chart 15

# The New 5000 Process Emphasis on Technology

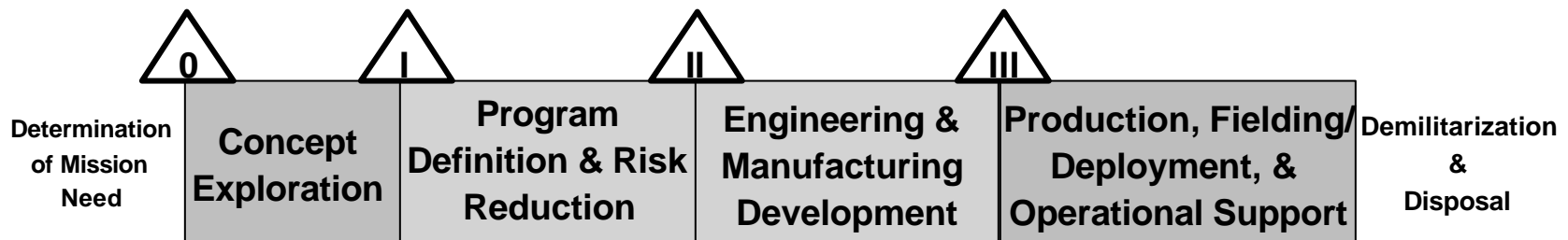
- **Technology Transition Objectives - Component S&T Executives shall:**
  - Advise requirements & acquisition communities of new technology developments
  - Conduct independent technology assessments
- **Technology Transition Mechanisms**
  - Advanced Technology Demonstrations (ATDs)
  - Advanced Concept Technology Demonstrations (ACTDs)
  - Experiments



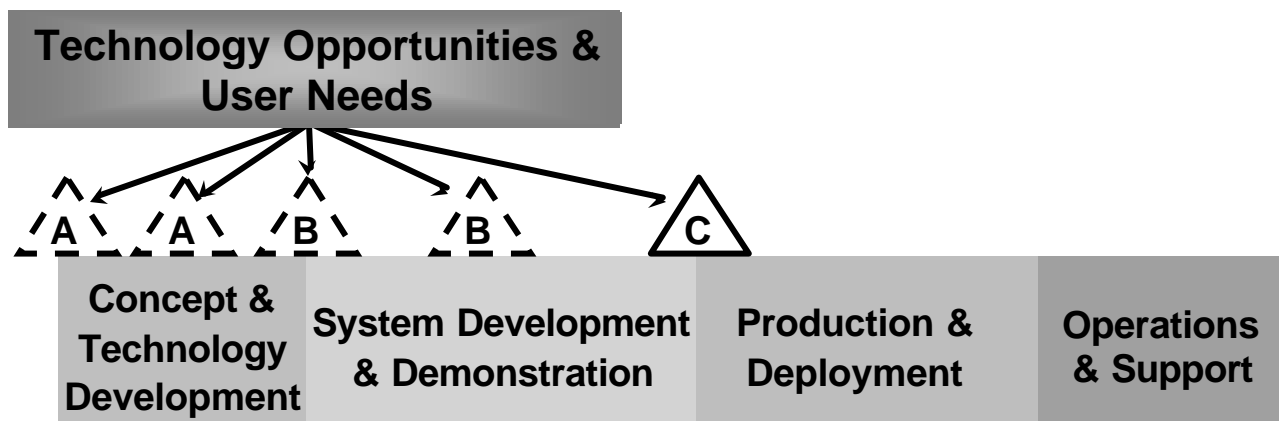
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# The 5000 Process old and new

## Old Process

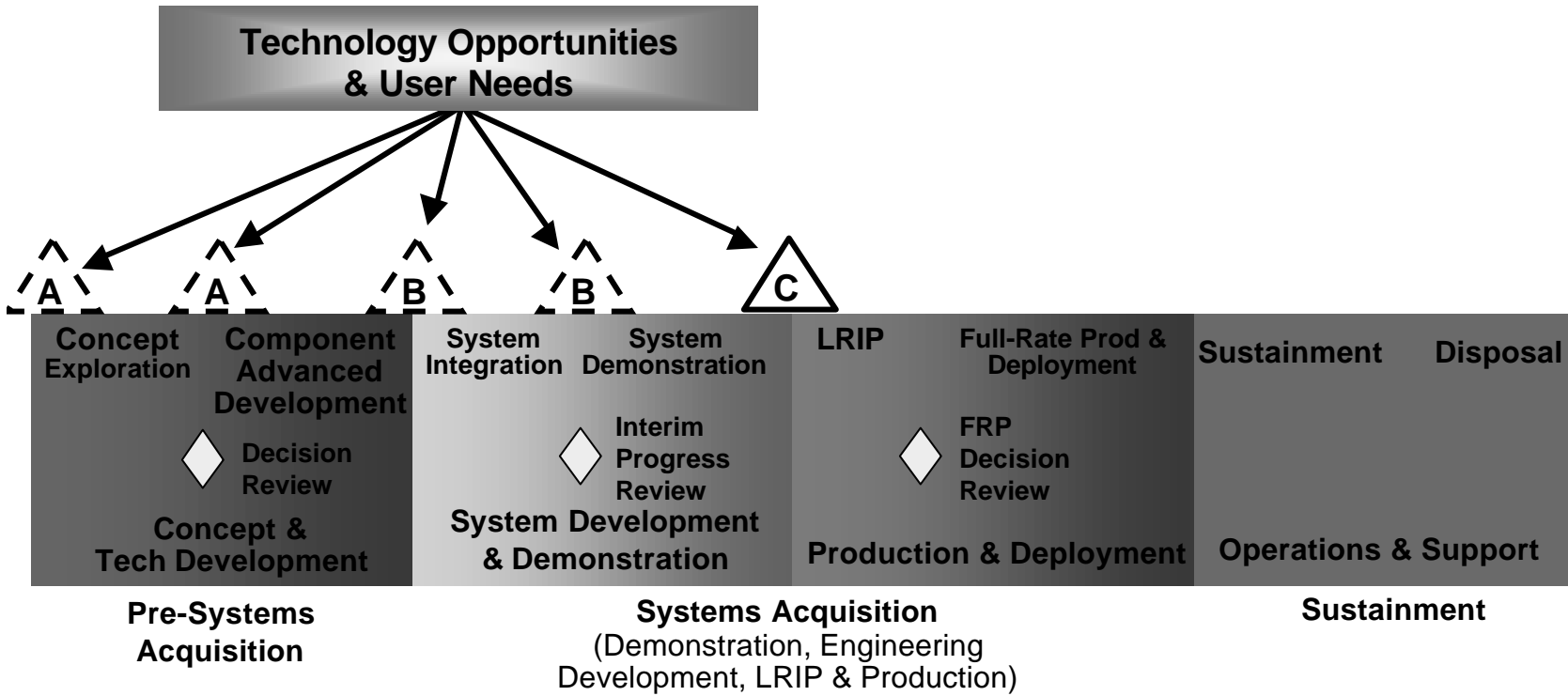


## New Process





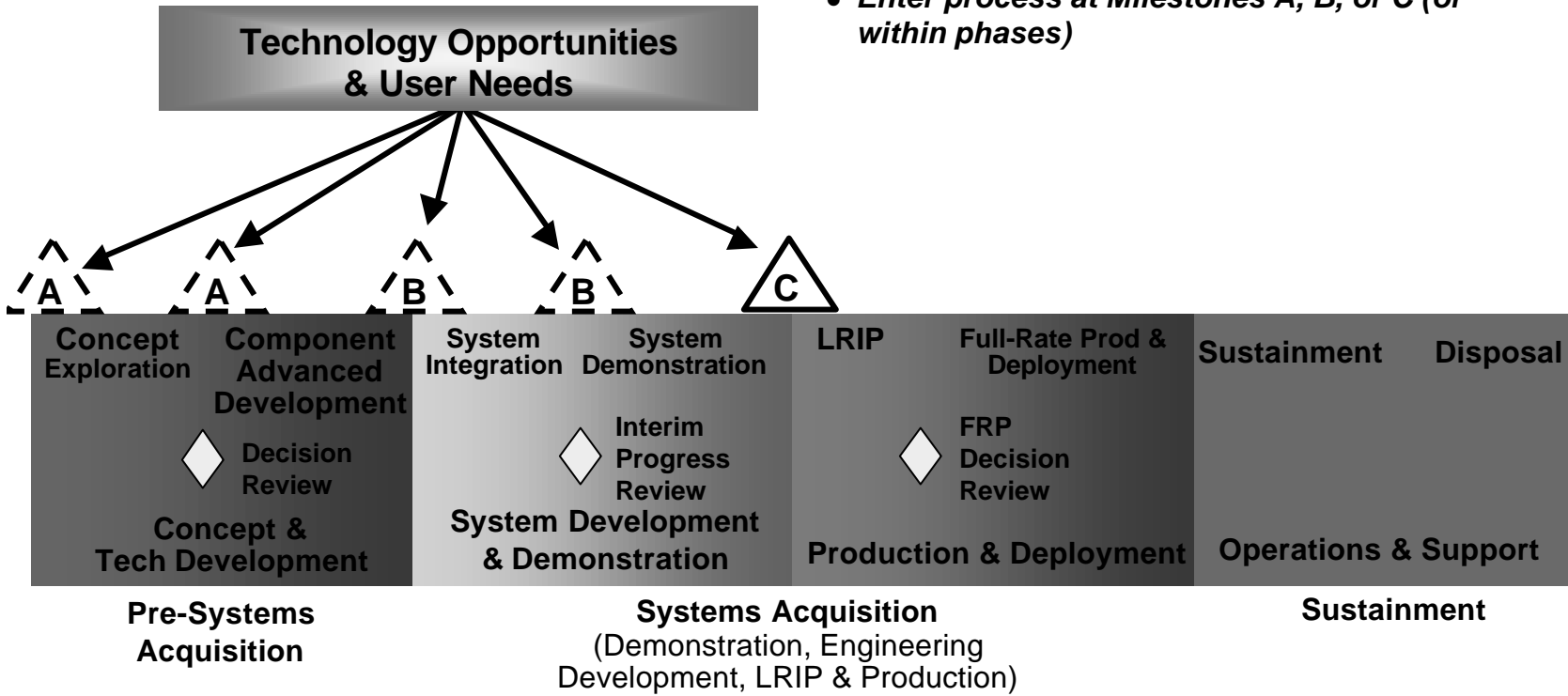
# Defense Acquisition Management Framework





# Defense Acquisition Management Framework

- Enter process at Milestones A, B, or C (or within phases)

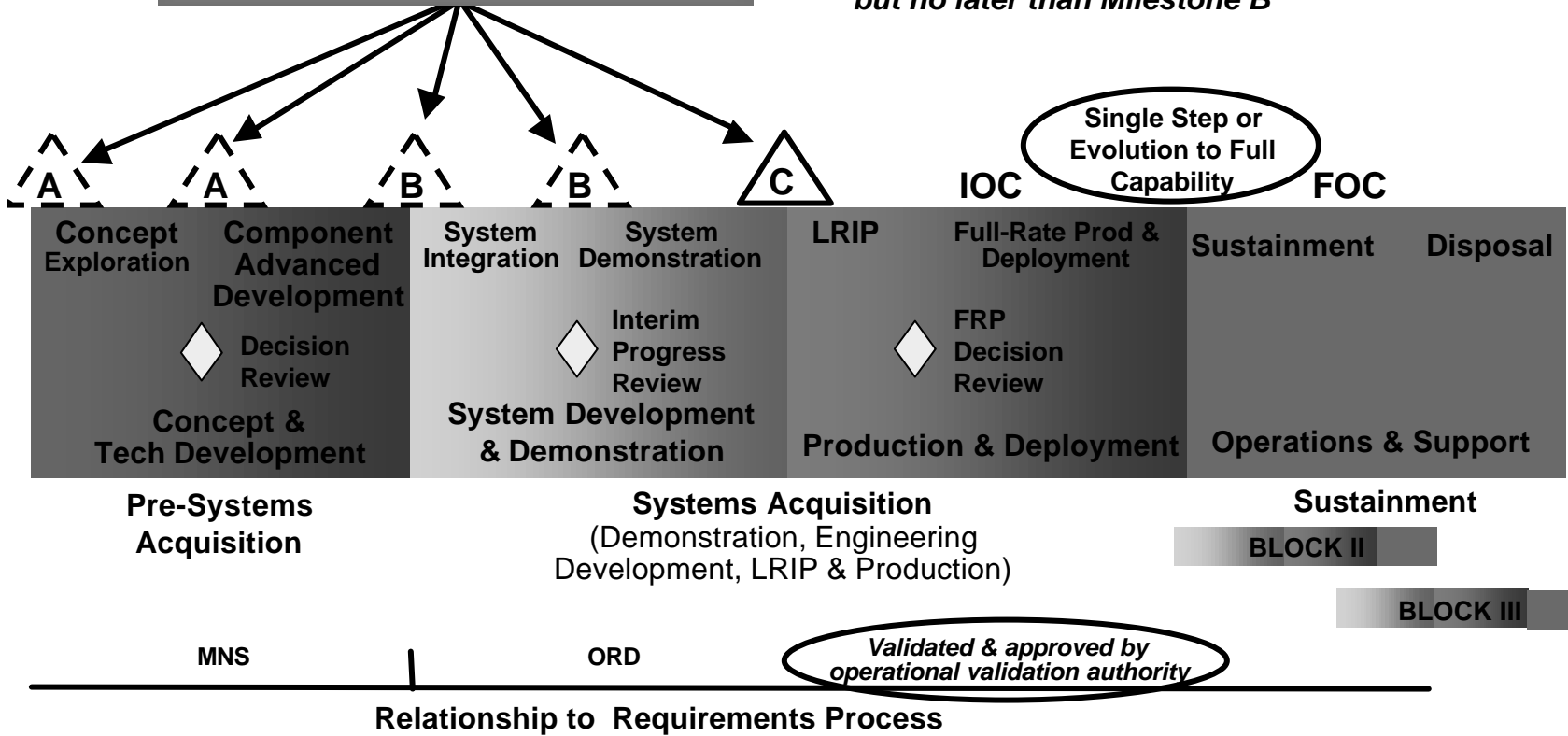




# Defense Acquisition Management Framework

Technology Opportunities & User Needs

- Enter process at Milestones A, B, or C (or within phases)
- Program outyear funding when it makes sense, but no later than Milestone B





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# Implementation Challenges

- **Accepting a militarily useful capability early, based on demonstrated technology, and obtaining objective capability when technology matures**
- **Ensuring that successive evolutionary blocks are adequately funded**
- **Ensuring that “transition funding” is available to speed the transition of successful demonstrations to acquisition**
- **Integrating the test and evaluation community into the new acquisition approach**
- **Ensuring that the workforce (including industry) is adequately trained to successfully implement the new approach**
- **Assuring Congress that the new approach will maintain their visibility into DoD programs and continue their ability to verify DoD’s accountability for program success**
- **Employing new product support strategies**



# DoD 5000 Series Resource Center

- DAU Home
- Links
- Help



## Documents

- ▶ DoD Directive 5000.1
- ▶ DoD Instruction 5000.2
- ▶ DoD Regulation 5000.2-R

## Learning Resources

- ▶ Terminology Review
- ▶ Defense Acquisition Process Tutorial
- ▶ Frequently Asked Questions

**Brought to you by DSMC and ODUSD(AR)**

**<http://dod5000.dau.mil>**

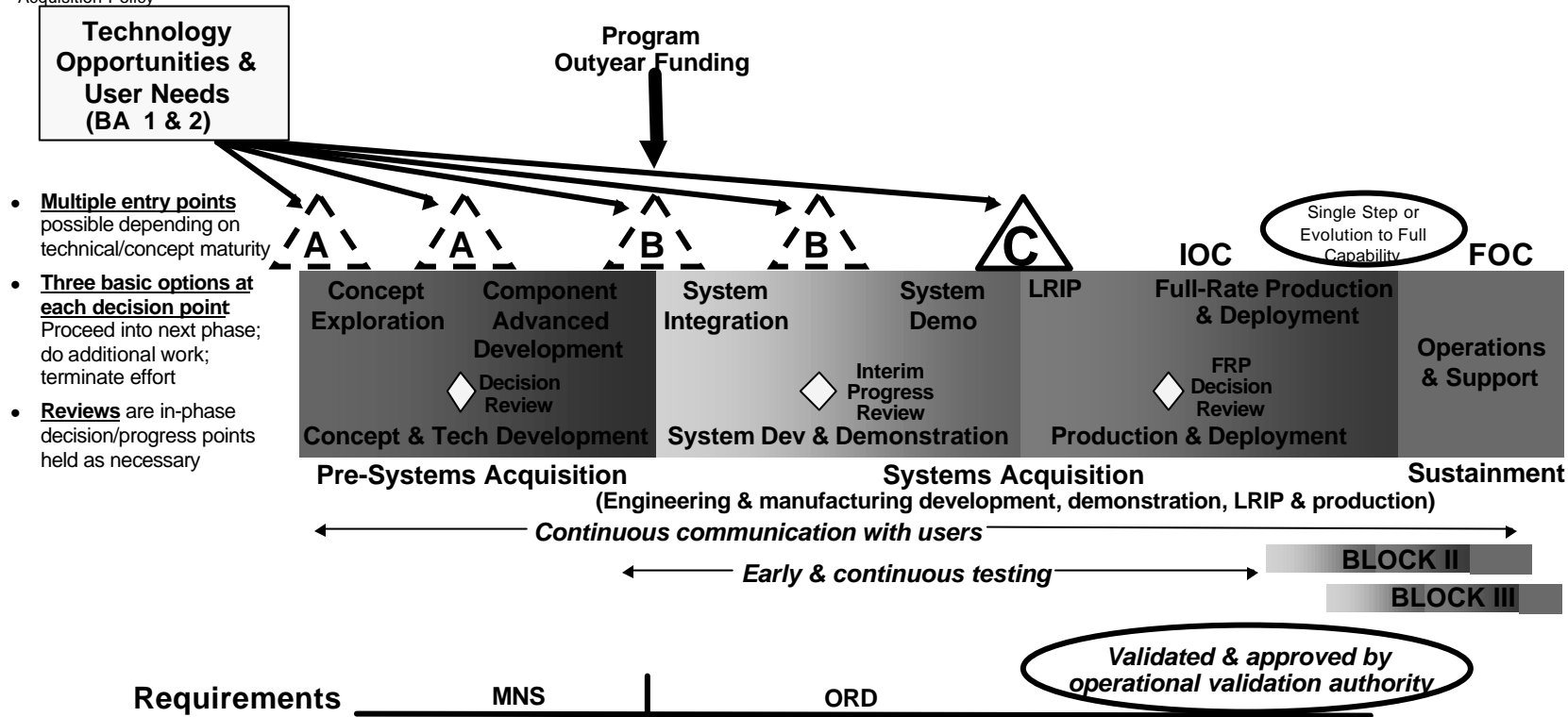
# **Back-up Charts**





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# The 5000 Process



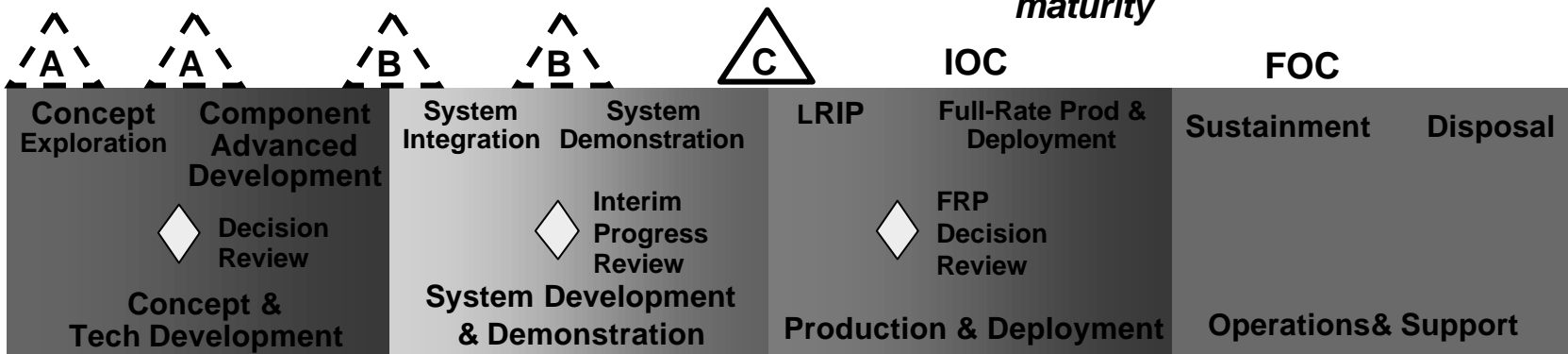
- | <u>Concept Exploration</u>   | <u>Component Advanced Development</u>   | <u>System Integration</u>   | <u>System Demonstration</u>   | <u>Low-Rate Initial Production</u>   | <u>Full-Rate Prod &amp; Deployment</u>   |
|--|---|---|---|--|--|
| <ul style="list-style-type: none"> <li>• Paper studies of alternative concepts for meeting a mission need</li> </ul> | <ul style="list-style-type: none"> <li>• Development of subsystems/components that must be demonstrated before integration into a system</li> <li>• Concept/tech demo of new system concepts</li> </ul> | <ul style="list-style-type: none"> <li>• System integration of demonstrated subsystems and components</li> <li>• Reduction of integration risk</li> </ul> | <ul style="list-style-type: none"> <li>• Complete development</li> <li>• Demo engineering development models</li> <li>• Combined DT/OT</li> </ul> | <ul style="list-style-type: none"> <li>• IOT&amp;E, LFT&amp;E of prod-rep articles</li> <li>• Create manufacturing capability</li> <li>• LRIP</li> </ul> | <ul style="list-style-type: none"> <li>• Full rate production</li> <li>• Deployment of system</li> </ul> |



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# Concept Overview

*Programs can enter the process at various points depending on concept and technology maturity*



- Joint Maritime Command and Control Capability
- Hard and Deeply Buried Target Capability
- Advanced Narrow Band System

- Airborne Laser
- Joint Advanced Strike Technology
- DD-21

- F-16 Upgrade
- Joint Direct Attack Munition
- CVN-77

- Fast Sea Lift Ships
- Global Hawk (transition into acquisition)
- Joint Primary Aircraft Training System

- Non-Developmental Airlift Alternative
- Administrative Use Vehicles
- C-9

Note: These are notional examples of where these programs might have entered the new process based on historical data of the PM's estimate of technology maturity.



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# Information For Milestones & Reviews

Information (DoDI 5000.2)	Milestone/Review					
	A	DR	B	IPR	C	FRP
Acquisition Decision Memorandum	X	X	X	X	X	X
Acquisition Program Baseline		Note 1	X		X	X
Acquisition Strategy (28 major elements)		Note 1	X		X	X
Affordability Assessment			X		X	
Analysis of Multiple Concepts	X					
Analysis of Alternatives			X		Note 3	
Application for Frequency Allocation			X		X	
Beyond LRIP Report (note 2)						X
C4 Integrated Support Plan		Note 1	X		X	
Clinger-Cohen Act Compliance (all IT)		Note 1	X		X	X
Compliance with Strategic Plan			X		X	
Component Cost Analysis (MAIS; optional MDAP)			X			X
Consideration of Technology Issues	X		X		X	
Cooperative Opportunities			X		X	X
Cost Analysis Requirements Description (MDAPs)			X		X	X
Economic Analysis (MAIS)			X			
Exit Criteria	X	X	X	X	X	X
Independent Cost Estimate (MDAPs; n/a AIS)			X		X	X
Independent Technology Assessment			X		X	

Notes: 1. At entry to CAD if CAD is program initiation. 2. OSD T&E Oversight programs. 3. If no MS B.



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## Information For Milestone/Decision Reviews, continued

Information (DoDI 5000.2)	Milestone/Review					
	A	DR	B	IPR	C	FRP
Interoperability Certification						X
IT Certification (MAIS)		X	X		X	X
Live Fire T&E Waiver (covered systems)(note 2)			X			
Live Fire T&E Report (covered systems)(note 2)						X
LRIP Quantities			X			
Manpower Estimate (MDAPs)			X			X
Market Research	X		X			
Mission Need Statement	X					
National Environmental Policy Act Schedule		Note 1	X		X	X
Operational Requirements Document			X		X	
OT&E Results			X		X	X
Post Deployment Performance Review						X
Program Protection Plan			X		X	
Registration of Msn Critical & Msn Essential Info Sys		Note 1	Note 1		Note 1	
System Threat Assessment (n/a AIS)			X		X	
Selected Acquisition Report (MDAPs)		Note 1	X		X	X
Test & Evaluation Master Plan	Note 3		X		X	X

Notes: 1. If program initiation. 2. OSD T&E Oversight programs. 3. Eval strategy for MNS due 180 days after MS A



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# Acquisition Strategy Elements

*Interim DoD 5000.2-R, 4 Jan 01*

- **Requirements**
  - Approved Source Docs
  - Status of In-process Source Docs
- **Program Structure**
- **Acquisition Approach**
- **Risk**
- **Program Management**
  - Resources
    - Advance Procurement
    - PMO Staffing & Support
  - Info Sharing & DoD Oversight
  - IDE
  - Tech Reps at Contractor Facilities
  - Government Property In Possession of Contractors
  - Tailoring & Streamlining
    - Requests for Relief or Exemption
    - Applying Best Practices
  - Planning for Modeling & Simulation
  - Independent Expert Review of Software Intensive Programs
- **Design Considerations**
  - Open Systems
  - Interoperability
    - IT Interoperability
    - Other than IT Integration
  - IT Supportability
  - Protection of Critical Program Info & Anti-Tamper Provisions
- **Support Strategy**
  - Product Support
    - Management Plan
    - Integration
  - Source of Support
    - Depot Maintenance
    - Supply
    - Contractor Log Support
  - Human Sys Integration
  - Environ Safety & Occupational Health
  - Demil & Disposal
  - Life Cycle Support Oversight
  - Post Deployment Evaluation



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# Acquisition Strategy Elements

*Interim DoD 5000.2-R, continued..*

- **Business Strategy**
  - **Competition**
    - **Fostering a Competitive Environment**
      - ◆ **Competition Advocates**
      - ◆ **Ensuring Future Competition**
    - **Building Competition Into Strategies**
      - ◆ **Acquisition Phases**
      - ◆ **Evolutionary Acquisition**
      - ◆ **Industry Involvement**
    - **Potential Obstacles**
      - ◆ **Exclusive Teaming**
      - ◆ **Sub-Tier Competition**
    - **Potential Sources**
      - ◆ **Market Research**
      - ◆ **Commercial & NDI**
      - ◆ **Dual-Use Tech & Comm Plants**
      - ◆ **Industrial Capability**
    - **SBIR Technologies**
  - **International Cooperation**
    - **Cooperative Strategy**
    - **Interoperability**
    - **Compliance**
    - **Testing Required for Foreign Military Sales**
  - **Contract Approach**
    - **Major Contracts Planned**
    - **Contract Type**
    - **Contract Incentives**
    - **Performance Mgmt**
    - **Integrated Baseline Reviews**
    - **Special Terms & Conditions**
    - **Warranties**
    - **Component Breakout**
  - **Leasing**

From DoDI 5000.2, Encl 3, Table 1

- |                       |                           |
|-----------------------|---------------------------|
| •Partnering Analysis  | •Core Logistics Analysis/ |
| •Make or Buy Analysis | Source of Supply Analysis |



# The New 5000 Process Milestones, Phases & Work Efforts

T&E Conf 26 Mar chart 29

**OLD: “pipeline” approach:  
4 Milestones; 4 Phases**

- **Milestone 0, Approval to Conduct Concept Studies**
  - Phase 0, Concept Exploration
- **Milestone I, Approval to Begin a New Acquisition Program**
  - Phase I, Program Definition & Risk Reduction
- **Milestone II, Approval to Enter Engineering & Manufacturing Development**
  - Phase II, Engineering & Manufacturing Development
- **Milestone III, Production or Fielding/Deployment Approval**
  - Phase III, Production, Fielding/Deployment, & Operational Support

**NEW: “flexible entry” approach:  
3 Milestones; 4 Phases; 8 work efforts**

- **Milestone A, Decision to enter Concept & Technology Development Phase.** May enter at:
  - Concept Exploration, or
  - Component Advanced Development
- **Milestone B, Program Initiation, and Decision to enter System Development & Demonstration Phase.** May enter at:
  - Systems Integration, or
  - Systems Demonstration
- **Milestone C, Decision to enter the Production & Deployment Phase**
  - LRIP (ACAT I/II), or production/procurement (ACAT III)
  - Production & Deployment
- **Operations & Support Phase**
  - Sustainment
  - Disposal