

**Summary of SD-19 Draft  
Chapters 1 and 2 as part of  
Ongoing Revision**

**Presented to the Parts Standardization & Management  
Committee**

**April 23 - 24, 2013**



**4850 Mark Center Drive  
Alexandria, Virginia 22311**

# Outline

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- **Chapter 1: Parts Management Contributions to Affordable System Operational Effectiveness**
- **Chapter 2: Timing, Implementation, and Responsibilities for Parts Management Contractual Requirements**

# Parts Management Overview (1 of 2)

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- **Why parts management is important**
  - **SE throughout life-cycle management**
    - **A life-cycle approach to system planning, development, and sustainment is fundamental to systems engineering. The program manager (PM) shall be the single point of accountability for accomplishing program objectives for total life cycle systems management, including sustainment.**
    - **PMs shall consider supportability, life cycle costs, performance, and schedule comparable in making program decisions. Planning for Operations and Support and the estimation of total ownership costs shall begin as early as possible. Supportability, a key component of performance, shall be considered throughout the system life cycle.**

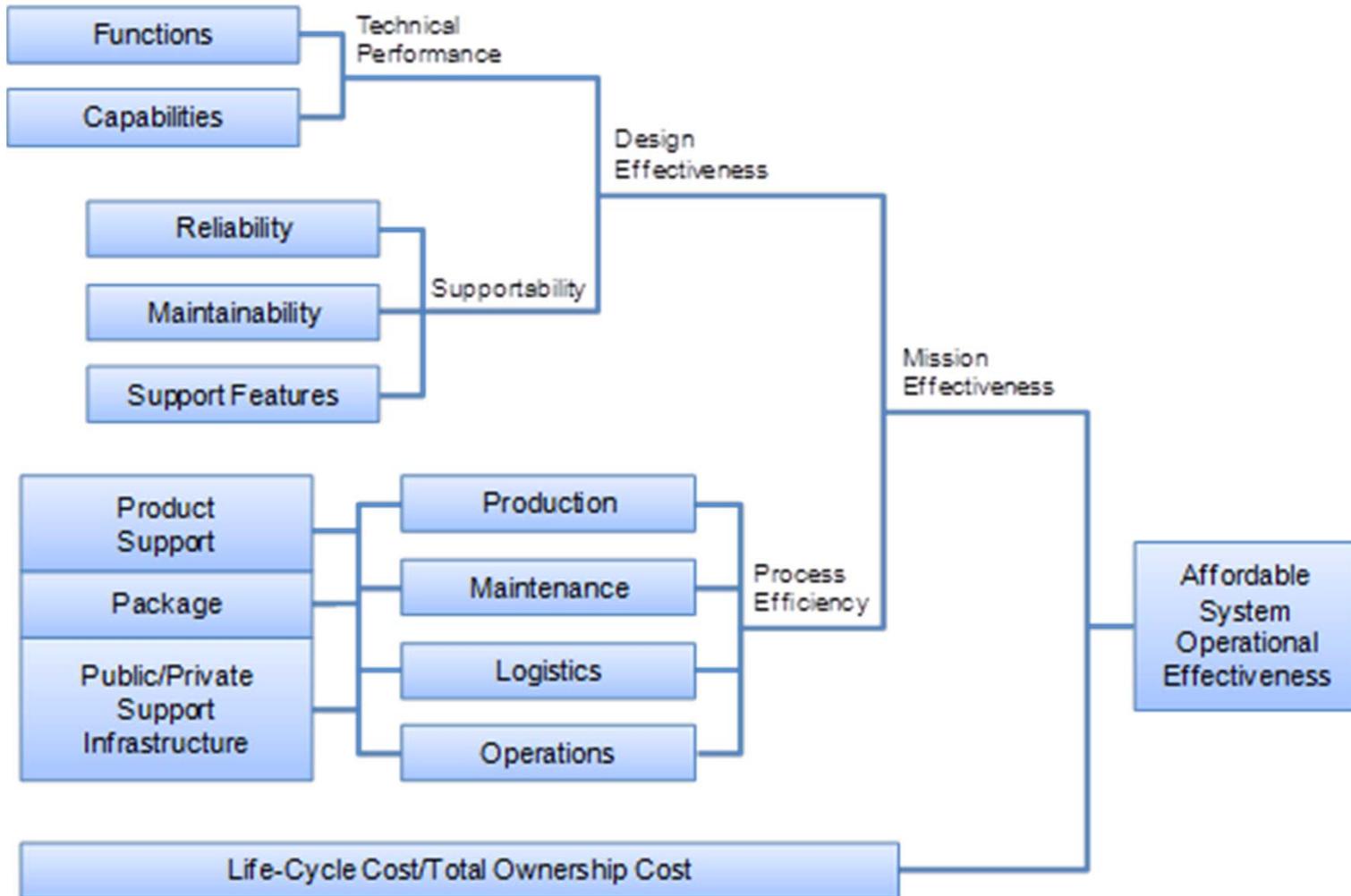
## Parts Management Overview (2 of 2)

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- **Why parts management is important**
  - **Linkage to parts management**
    - **Parts Management along with standardization are SE design considerations. Selecting the right, standard part is fundamental to achieving many SE and manufacturing objectives.**
      - **From a PM perspective, these design considerations ensure the system is made up of proven parts with existing suppliers**
      - **From a systems engineering perspective, these design considerations enable a reliable, maintainable, affordable system that performs well**
      - **Readiness and total ownership cost**
      - **DMSMS**

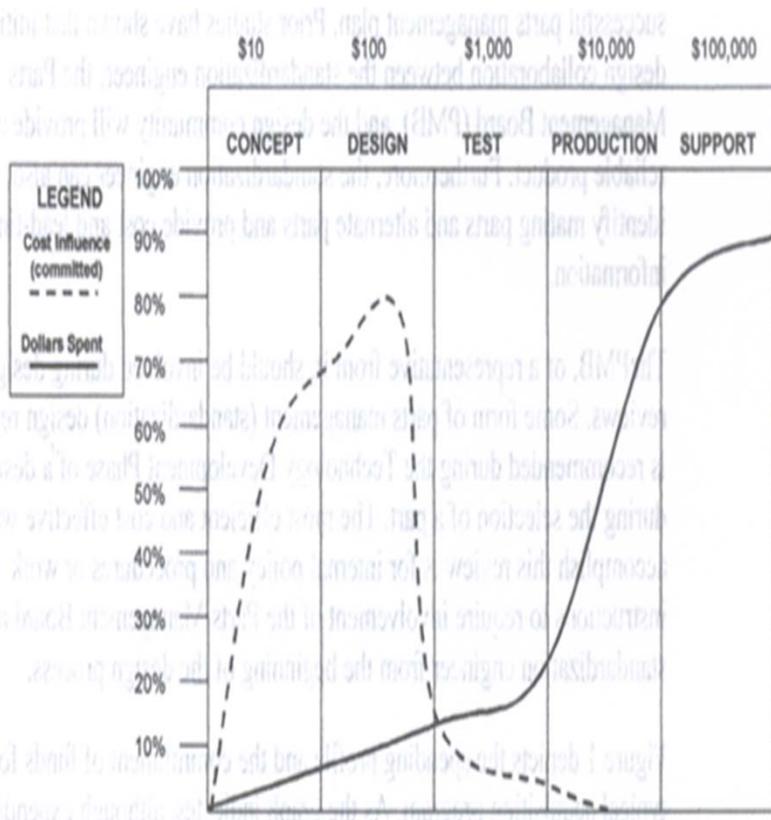
# Affordable System Operational Effectiveness

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# Design Effectiveness and Parts Management

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- **Parts management contributes to design considerations**
  - Reliability
  - Standardization
  - DMSMS
  - Part and supplier quality

# Process Efficiency and Parts Management

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- **Manufacturing readiness threads**
  - Industrial base
  - Design
  - Cost and funding
  - Materials
  - Process capability and control
  - Quality management
  - Manufacturing management
- **Supply chain management**
  - Reduced acquisition lead-time
  - Part and supplier quality
  - Enhanced logistics readiness and interoperability
  - Increased supportability and safety of systems and equipment
- **Product Support**
  - DMSMS risk management
  - Lead-free electronics risk management

# Total Ownership Cost and Parts Management

- **Costs**
- **Benefits**
- **Cost benefit analysis**
  - **Programs without parts management requirements introduce 2.5 percent more new parts into the logistics system than do programs with parts management requirements**

*Table 1. Average Costs for Adding a Part into a System*

Activity	Cost
Engineering and design	\$12,600
Testing <sup>a</sup>	1,000
Manufacturing	2,400
Purchasing	5,200
Inventory	1,200
Logistics support	5,100
Total	\$27,500

<sup>a</sup> The testing cost was reduced significantly because not every part added to inventory requires testing. However, every part needs to be evaluated, either by similarity, bench test, or analysis.

**Added costs of adopting a unique part design may be offset by lower manufacturing and/or support costs**

# Outline

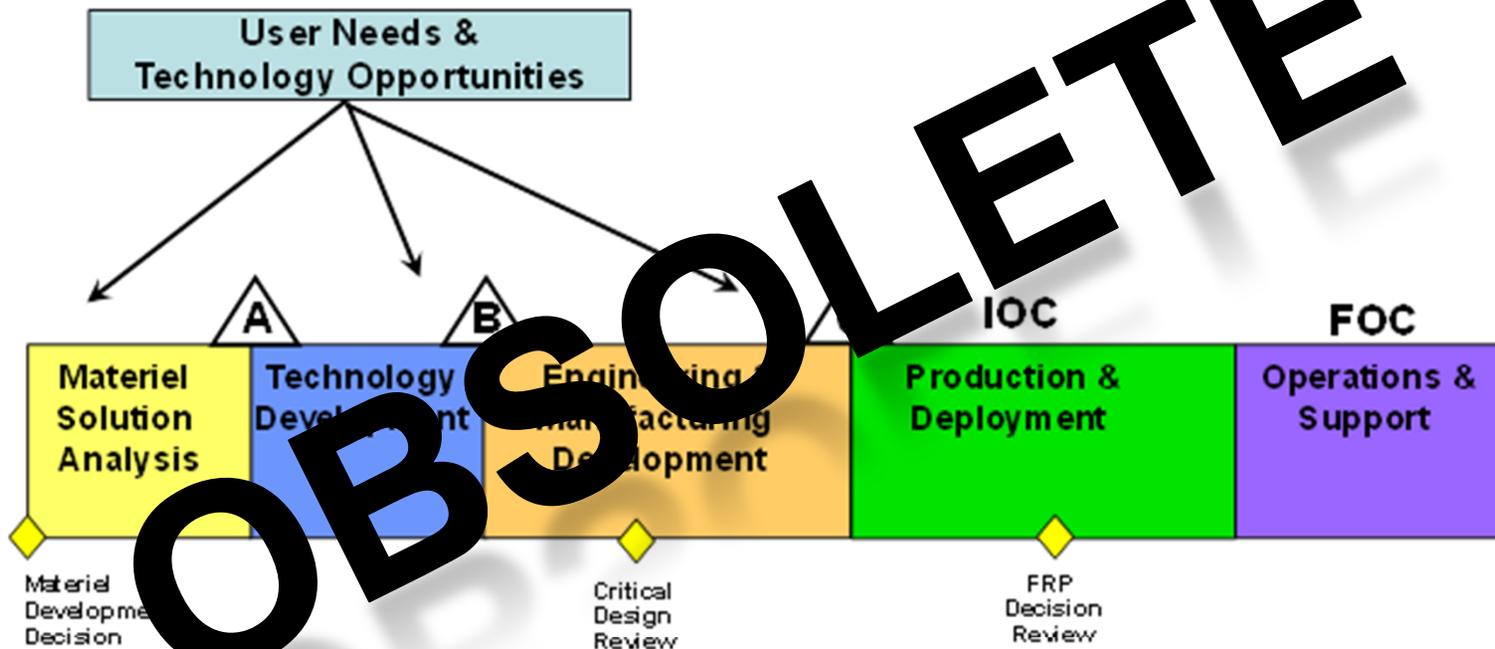
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- **Chapter 1: Parts Management Contributions to Affordable System Operational Effectiveness**

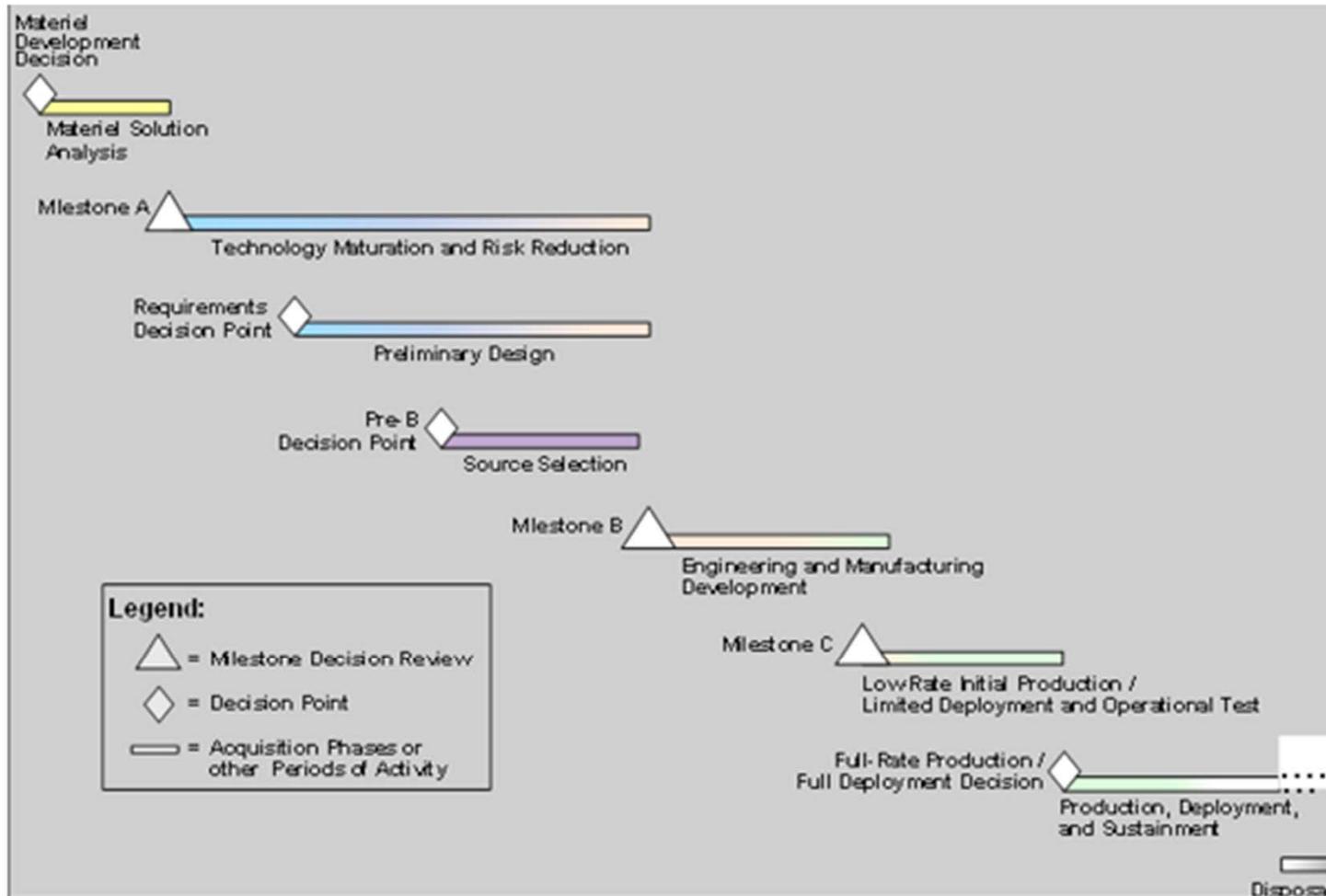
- **Chapter 2: Timing, Implementation, and Responsibilities for Parts Management Contractual Requirements**

# Parts Management in the Defense Acquisition System

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# New Generic Acquisition Model



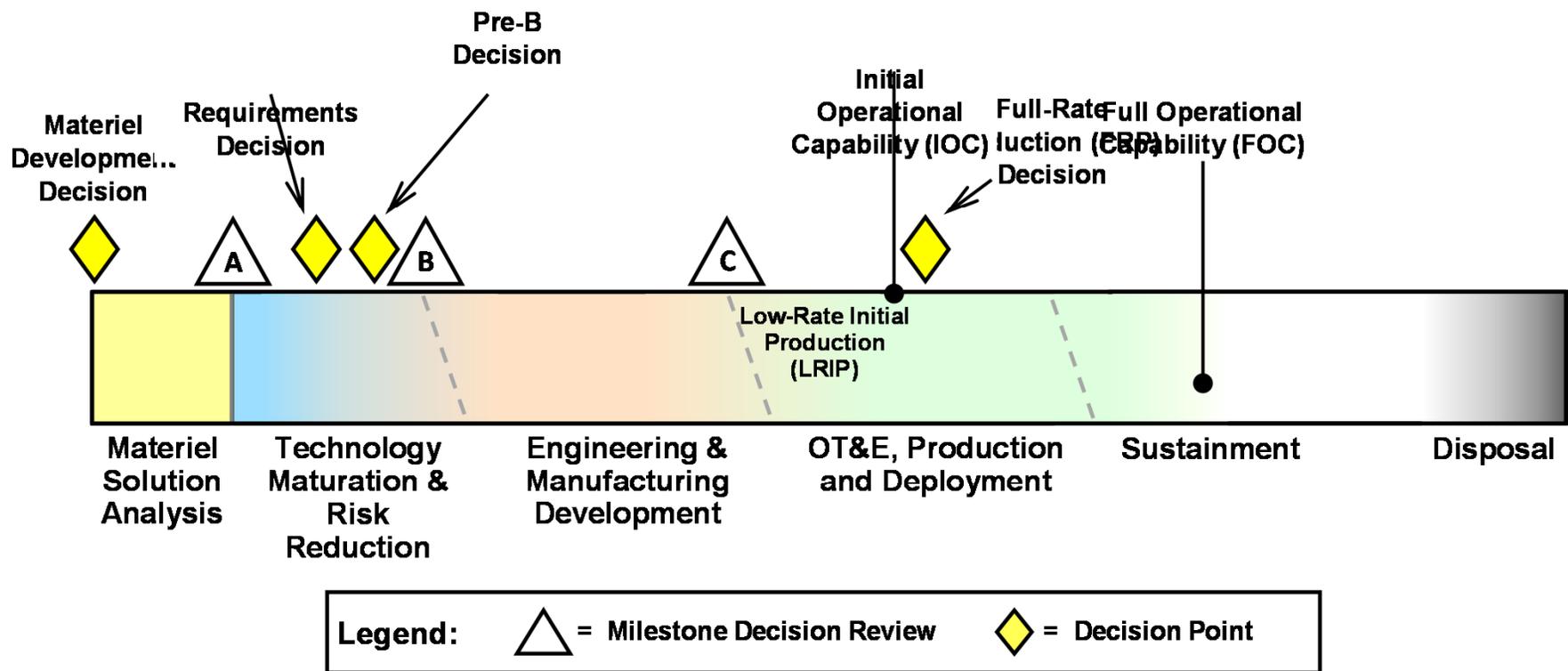
Source: March 12, 2013 Review Draft of Department of Defense Instruction 5000.02, Operation of the Defense Acquisition System

# Several Specific Acquisition Models Illustrated

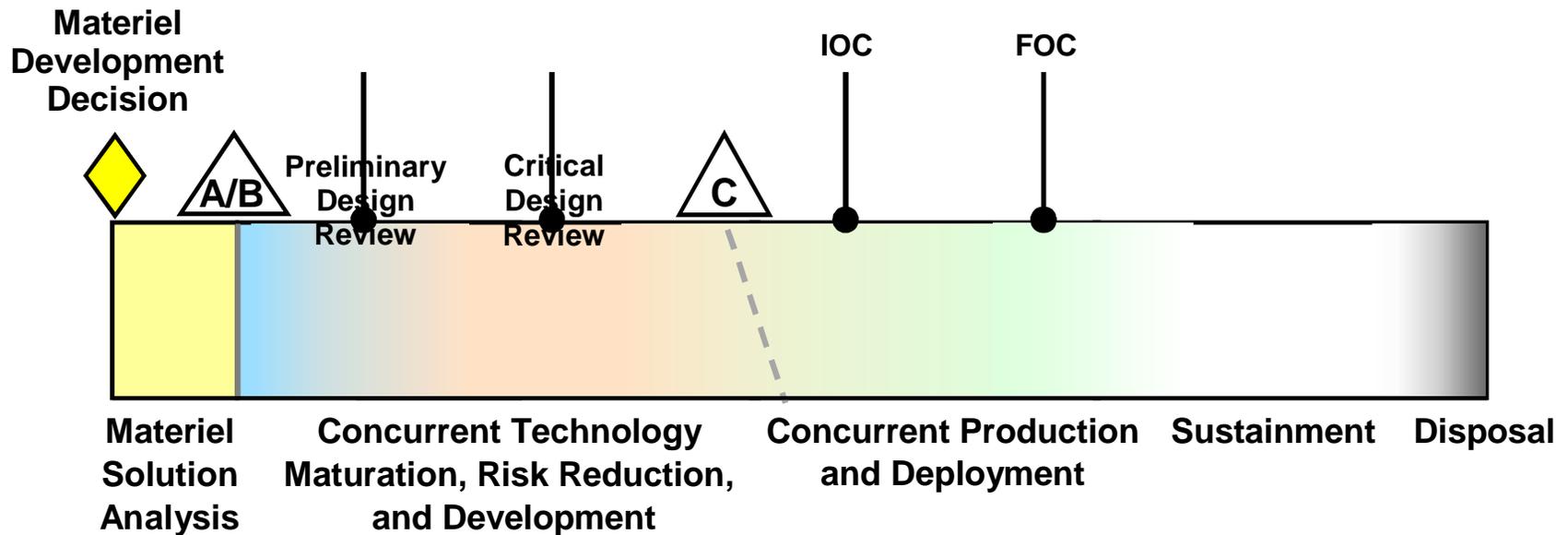
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- **Model 1: hardware intensive program**
- **Model 2: defense unique software intensive program**
- **Model 3: incrementally fielded software intensive program**
- **Model 4: accelerated acquisition program**
- **Hybrid acquisition programs**

# Hardware Intensive Program

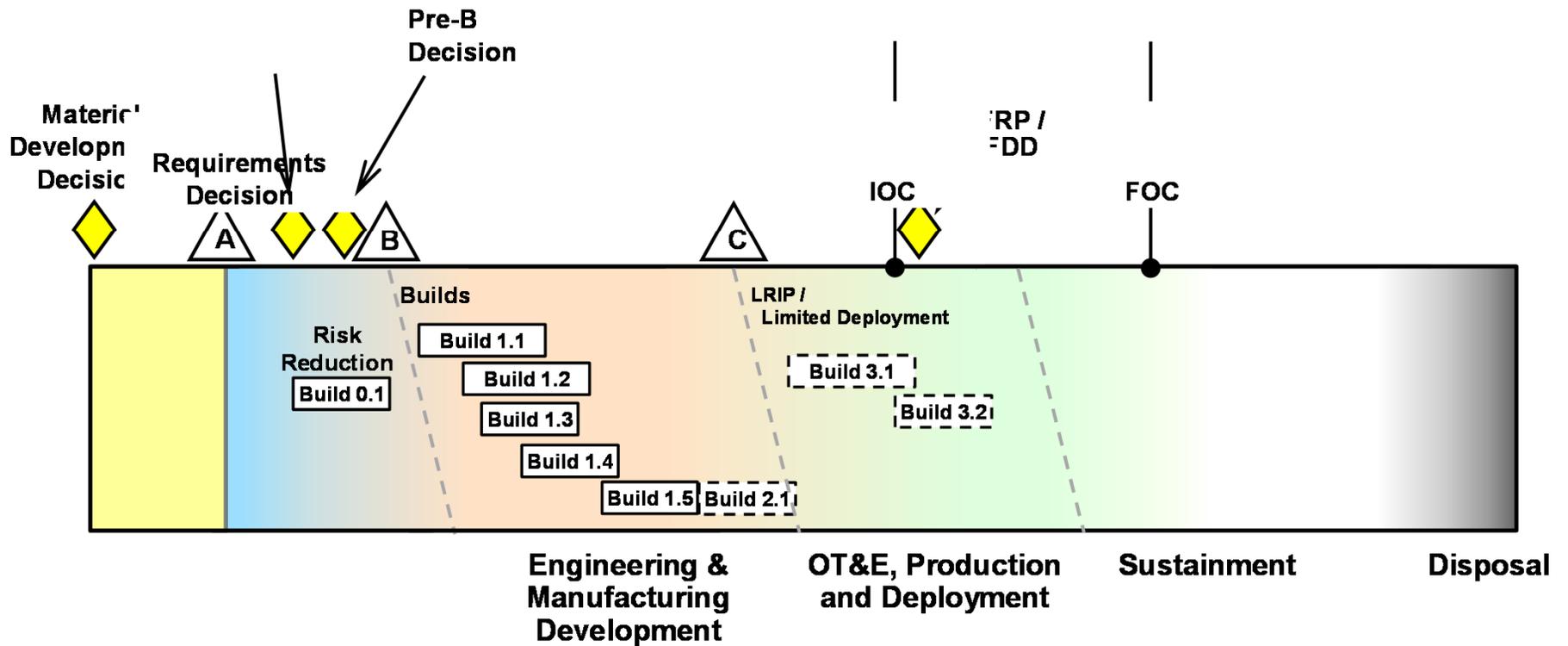


# Accelerated Acquisition Program



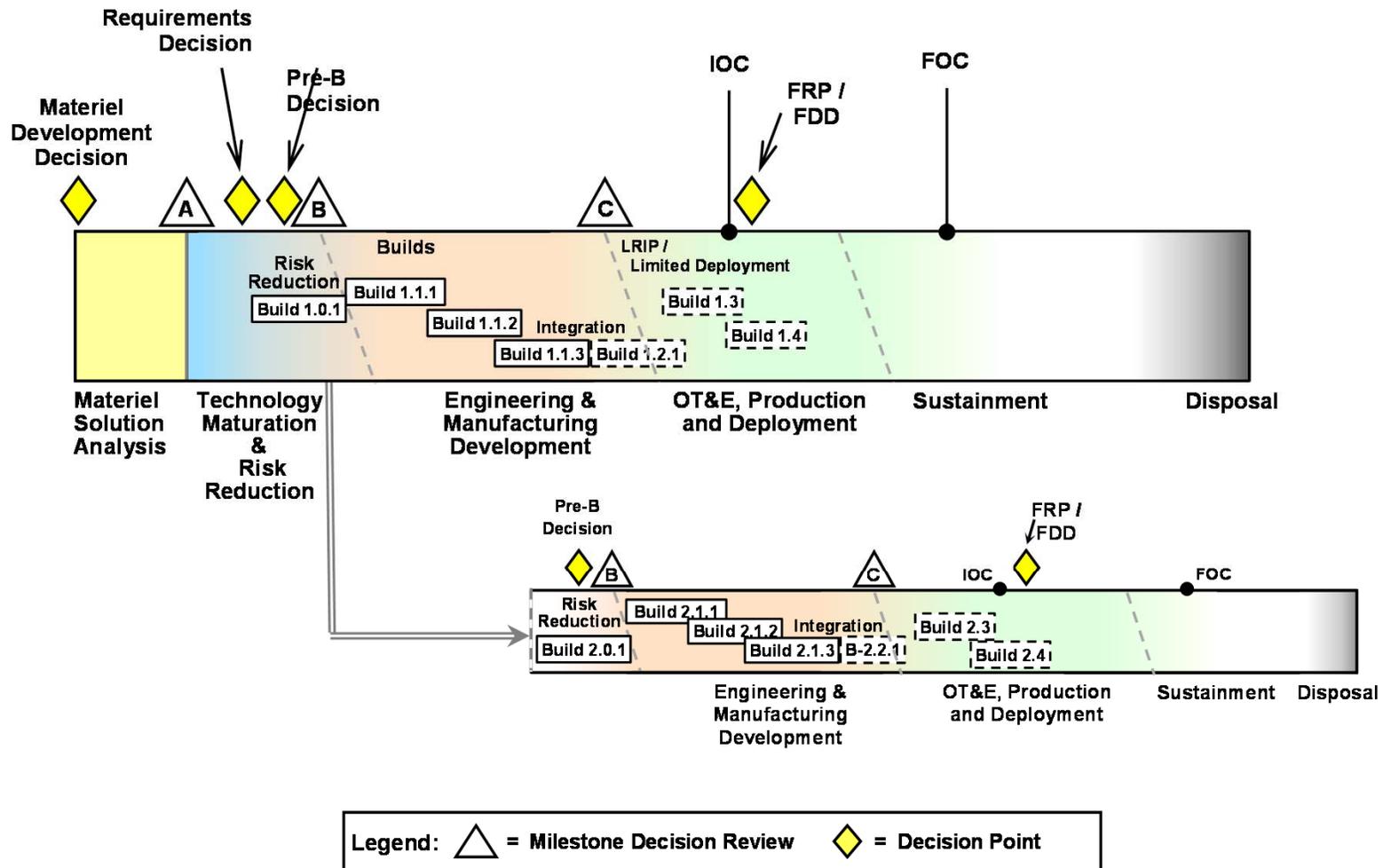
**Legend:**     = Milestone Decision Review     = Decision Point

# Hybrid Program A Hardware Dominant

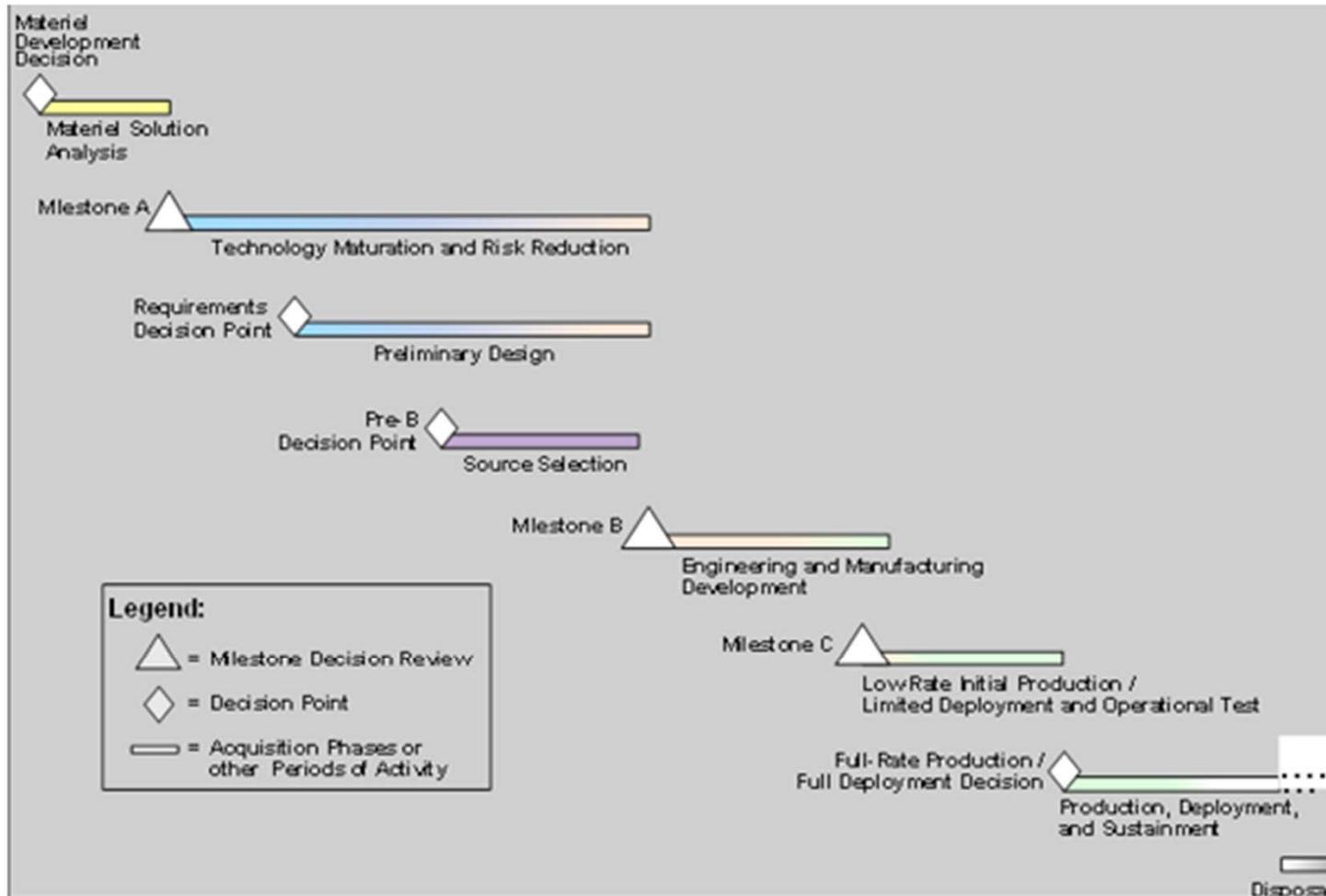


Legend:  = Milestone Decision Review  = Decision Point

# Hybrid Program B Software Dominant



# New Generic Acquisition Model



Source: March 12, 2013 Review Draft of Department of Defense Instruction 5000.02, Operation of the Defense Acquisition System

# Addressing Parts Management in the Contract

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- **Inclusion of MIL-STD-3018 is the most effective way of minimizing the costly proliferation of parts**
- **Include parts management language in Statement of Work (SOW) or Statement of Objectives (SOO)**
  - **Government may include requirement in SOW and ask contractor to respond in a proposal**
  - **Government may include language in SOO and ask contractor to discuss parts management in its SOW**
- **Examples provided**

# **Parts Management Responsibilities during the DOD Acquisition and Sustainment Process**

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- **Acquisition activity responsibilities**
  - Establishing requirements
  - Ensuring contractor plans meet Parts Management Plan (PMP) objectives
  - Parts management oversight
- **Contractor responsibilities**
  - Parts selection
  - Implementing the PMP
  - Managing subcontractor parts management activities
- **Systems engineering technical review responsibilities**
- **Logistics assessment responsibilities**