

TAILORING FOR SUCCESS: THE NEWEST VERSION OF DODI 5000.02



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AGENDA

- **Policy**
 - **5000.02 Changes**
 - **Tailoring and Models**
 - **Milestones and Acquisition Phases**
 - **Program Management Enclosure**
 - **T & E Enclosure**
 - **Rapid Fielding Enclosure**
 - **Wrap Up**
- Feel free to ask questions at any time via CHAT

USD (AT&L) POLICY MEMO



THE UNDER SECRETARY OF DEFENSE
3010 DEFENSE PENTAGON
WASHINGTON, DC 20301-3010

JAN 07 2015

MEMORANDUM FOR THE ACQUISITION WORKFORCE

SUBJECT: Department of Defense Instruction 5000.02

This memorandum issues the new Department of Defense Instruction (DoDI) 5000.02 and cancels the interim version that was implemented on November 25, 2013. This version implements many of the policies and practices included in the sequence of three sets of Better Buying Power initiatives.

Successful defense acquisition depends on careful thinking and sound professional judgments about the best acquisition strategy to use for a given product. Even more than previous versions, this DoDI 5000.02 emphasizes tailoring of program structures, content, and decision points to the product being acquired. DoDI 5000.02 contains several program structure models instead of a single model. These models, however, are not alternatives from which a Program Manager must choose; they serve as examples and starting points that can and should be tailored to the actual product being acquired. Program Managers and Program Executive Officers should use these models as references to assist their thought processes and analysis of the best structure to use on a given program. Milestone Decision Authorities have been given broad authority to tailor program acquisition strategies.

Better Buying Power is based on the concept of continuous process improvement. We will never stop learning from our experience, and we will never completely exhaust the potential for improvement in how we acquire weapons and other systems for the Department. Therefore, I do not consider this or any version of DoDI 5000.02 to be the final word on acquisition policy. In fact, I hope that some positive changes to this DoDI 5000.02 can be implemented soon. One of them, which we are working closely with the Congress on, is to simplify and rationalize the complex set of statutory requirements that have been levied on our managers over the past few decades. These burdensome and overlapping requirements are reflected in the dense tables in Enclosure 1. I am hopeful that a much shorter set of the tables in Enclosure 1 can be published as a result of our ongoing legislative initiative in acquisition reform that we are working in collaboration with Congress. I have also already initiated work on a new enclosure that will deal with the increasingly serious problem of designing for and managing cyber-security in our programs. We must do a better job of protecting our systems and everything associated with them from cyber threats.

DoDI 5000.02 provides policy guidance, but it is also a tool that should be used by acquisition professionals, and the operational, programming, and intelligence professionals we work with, to deliver products that meet our warfighters' needs and deliver value to the American taxpayer.

Frank Kendall



Department of Defense INSTRUCTION

NUMBER 5000.02
January 7, 2015

USD(AT&L)

SUBJECT: Operation of the Defense Acquisition System

References: See References

1. **PURPOSE.** This instruction:

a. In accordance with the authority in DoD Directive 5000.01 (Reference (a)), reissues the interim DoD Instruction 5000.02 (Reference (b)) to update established policy for the management of all acquisition programs in accordance with Reference (a), the guidelines of Office of Management and Budget Circular A-11 (Reference (c)), and References (d) through (e).

b. Authorizes Milestone Decision Authorities (MDAs) to tailor the regulatory requirements and acquisition procedures in this instruction to more efficiently achieve program objectives, consistent with statutory requirements and Reference (a).

2. **APPLICABILITY.** This instruction applies to OSD, the Military Departments, the Office of the Chairman of the Joint Chiefs of Staff and the Joint Staff, the Combatant Commands, the Office of the Inspector General of the Department of Defense, the Defense Agencies, the DoD Field Activities, and all other organizational entities within the DoD (referred to collectively in this instruction as the "DoD Components").

3. **POLICY.** The overarching management principles and mandatory policies that govern the Defense Acquisition System are described in Reference (a). This instruction provides the detailed procedures that guide the operation of the system.

4. **RESPONSIBILITIES**

a. **Defense Acquisition Executive (DAE).** The DAE is the Under Secretary of Defense for Acquisition, Technology, and Logistics (USD(AT&L)). The DAE will act as the MDA for Major Defense Acquisition Programs (MDAPs) and Major Automated Information System (MAIS) programs. In accordance with Table 1 in Enclosure 1 of this instruction, the DAE may

TAILORING ...

A MAJOR THEME OF NEW DODI 5000.02

“Successful defense acquisition depends on careful thinking and sound professional judgments about the best acquisition strategy to use for a given product. Even more than previous versions, this DoDI 5000.02 emphasizes tailoring of program structures, content, and decision points to the product being acquired. DoDI 5000.02 contains several program structure models instead of a single model. These models, however, are not alternatives from which a Program Manager must choose: they serve as examples and starting points that can and should be tailored to the actual product being acquired. Program Managers and Program Executive Officers should use these models as references to assist their thought processes and analysis of the best structure to use on a given program. Milestone Decision Authorities have been given broad authority to tailor program acquisition strategies.”

*Frank Kendall, Under Secretary of Defense
(Acquisition, Technology and Logistics)*

DODI 5000.02

Implements new statutes/regulations since 2008

Implements several BBP initiatives

- Policies/Practices from all 3 sets of BBPi

Establishes Configuration Steering Boards (CSBs)

- Outlines CSB role in achieving Affordability Constraints

Increased Emphasis on the Threat

- Reconsidered at each Milestone Decision Point
- Identified as a Consideration during Configuration Steering Boards

Reinforces importance and primacy of acquisition chain of command

- PEOs and PMs have responsibility – all others are supporting/advisory

WHAT HAS REALLY CHANGED?

- The overall tone of the document—**from compliance to thoughtful planning**
- Enhanced discussion of program management responsibility and key supporting disciplines
- Example Program Models—**tailored** for the product being acquired and designed to serve as examples and starting points for structuring programs
- New/Expanded Policy Enclosures:
 - Program Management
 - Program Protection, including Cybersecurity
 - Intellectual Property (IP) Strategy
 - Operational Test and Evaluation (significantly expanded)
 - Life-Cycle Sustainment
 - Affordability Analysis and Investment Constraints
 - Defense Business Systems
 - Rapid Fielding of Capabilities



WHAT HAS REALLY CHANGED? (CONT.)

Re-written and re-focused acquisition process & procedures

- Adds Requirements Decision Point (CDD Validation)
- Adds Development Request For Proposal Release Decision (DRFPRD)
- Eliminates Post PDR, Post CDR, and Pre-EMD Review
- EMD Phase no longer divided into two “work efforts”
- De-emphasizes term evolutionary acquisition as the “preferred approach”
- Adds requirement for Concept of Operations / Operational Mode Summary / Mission Profile (CONOPS/OMS/MP) at Milestone A (MS A)
- Deletes Technology Development Strategy (TDS) at MS A – now requires Acquisition Strategy
- Deletes Test & Evaluation Strategy (TES) at MS A – now requires Test & Evaluation Master Plan (TEMP)
- Establishes requirement for Configuration Steering Boards (CSBs) – program requirements under cognizance of CSB after CDD Validation

MAJOR CHANGES (MODELS & PROCEDURES)

- **Core Document Re-Written to More Clearly Communicate Management Intent**
 - Most language related to statutory compliance (i.e., Formatted as Tables)
- **Notes Added to Tables to Clarify Requirement**
- **Substantial Revisions to All Enclosures**
 - Accommodate community concerns
 - Clarify/Streamline procedures
- **Document Re-Organized**

OVERARCHING OBJECTIVES

- Decrease emphasis on “checklists” and increase emphasis on process intent and thoughtful program planning
- Provide program structures and procedures tailored to the dominant characteristics of the product being acquired and to unique program circumstances, e.g., risk and urgency
- Enhance the discussion of program management responsibility and key supporting disciplines
- Institutionalize changes to statute and policy since the last full issuance of DoD Instruction 5000.02

DOCUMENT COMPARISON

2008 (80 pages):

Enclosures

Procedures

Acquisition Category (ACAT) and Milestone Decision Authority (MDA)

Statutory and Regulatory Information and Milestone Requirements

Program Management

Systems Engineering

Integrated T&E

Human Systems Integration

Resource Estimation

IT Considerations

Management of Defense Business Systems

Acquisition of Services (now separate DoDI)

** New or deleted text in red, major changes in blue*

2015 (154 pages):

Operation of the Defense Acquisition System

Enclosures

Acquisition Program Categories and Compliance Requirements

Program Management

Systems Engineering

Developmental Test and Evaluation (DT&E)

Operational and Live Fire Test and Evaluation (OT&E and LFT&E)

Life-Cycle Sustainment

Human Systems Integration (HSI)

Affordability Analysis and Investment Constraints

Analysis of Alternatives

Cost Estimating and Reporting

Requirements Applicable to All Programs Containing Information Technology (IT)

Defense Business Systems (DBS)

Rapid Fielding of Capabilities



STATUTE & POLICY DRIVING THE UPDATE

POLICY

USD(AT&L) Memos

- **Better Buying Power 1, 2 & 3**
- Designation of Subprograms for MDAPs
- EVM Systems Performance, Oversight, and Governance
- Government Performance of Critical Acquisition Functions
- Preservation and Storage of Tooling for MDAPs
- Reporting Requirements for Programs Qualifying as Both MAIS & MDAP
- **Should-cost Memos**
- Strengthened Sustainment Governance
- Improving Technology Readiness Assessment Effectiveness

PDUSD(AT&L) Memos

- **Improving Milestone Process Effectiveness**
- Post-CDR Reports and Assessments
- Milestone Decision Documentation Outlines

Other Memos

- Guidelines for Operational Test and Evaluation of Information and Business Systems
- DoD CIO Policy for CCA Confirmations

DIRECTIVE TYPE MEMOS

- DTM 09-027: **Implementation of WSARA 2009**
- DTM 09-025: Space Systems Acquisition Policy
- DTM 09-016: Supply Chain Risk Management (SCRM) to Improve the Integrity of Components Used in DoD Systems
- DTM 10-015: Requirements for Life Cycle Management and Product Support
- DTM 10-017: Development Planning
- DTM 11-003: Reliability Analysis, Planning, Tracking, and Reporting
- DTM 11-009: Acquisition Policy for Defense Business Systems



DoDI 5000.02

STATUTE

Title 10

- §2334: Independent cost estimation and analysis
- §2366: Major systems and munitions programs: survivability and lethality testing required before full scale production
- §2445c: MAIS Programs

NDAA

- §332 of FY09: Fuel Logistics Requirements
- §805 of FY10: Life-Cycle Management and Product Support
- §803 of FY11: Enhancing ... Rapid Acquisition
- §804 of FY11: ... Acquisition Process for Rapid Fielding of Capabilities in Response to Urgent Operation Needs
- §811 of FY11: Cost Estimates for MDAP and MAIS
- §812 of FY11: Management of Manufacturing Risk
- §932 of FY11: Computer Software Assurance
- §831 of FY11: [Waiver of Nunn-McCurdy for a Change in Quantity]
- §811 of FY12: Calculation Of Time Period [for MAIS] Critical Changes...
- §801 of FY12: Core Depot-level Maintenance and Repair Capabilities
- §832 of FY12: Assessment, Management, and Control of Operating and Support Costs for Major Weapon Systems
- §834 of FY12: Management of Manufacturing Risk in MDAPs
- §901 of FY12: Revision of DBS Requirements
- §811 of FY13: Limitation on use of cost-type contracts
- §812 of FY13: Estimates of Potential Termination Liability ...
- §904 of FY13: Additional Responsibilities (T&E)

ADDITIONAL CONSIDERATIONS

- JCIDS Reissuance
- New Emphasis on Cybersecurity
- New Emphasis on Intellectual Property (IP) Strategy
- FY10 NDAA, Sec. 804: Agile IT Development

NEW TABLES AND INFORMATION FORMAT

- Lengthy narrative and descriptions have been reduced to tabular format
- ONE summary table of Milestone and Phase Information Requirements
 - Each Row is a Requirement, with applicability defined by program type and event—presented in columns
 - Requirements identified as Regulatory or STATUTORY
 - Clear, accurate, useful notes for each entry
- Similar new tables for Recurring Reports and for Exceptions, Waivers, and Alternative Reporting Requirements
- Separate tables for APB Policy and for APB Breach and Change Definitions
- Services policy will no longer be included in DoDI 5000.02. A separate DoDI 5000 series policy document on the Acquisition of Services is in final review. In the interim, Enclosure 9 of DoDI 5000.02, 8 December 2008 remains applicable.

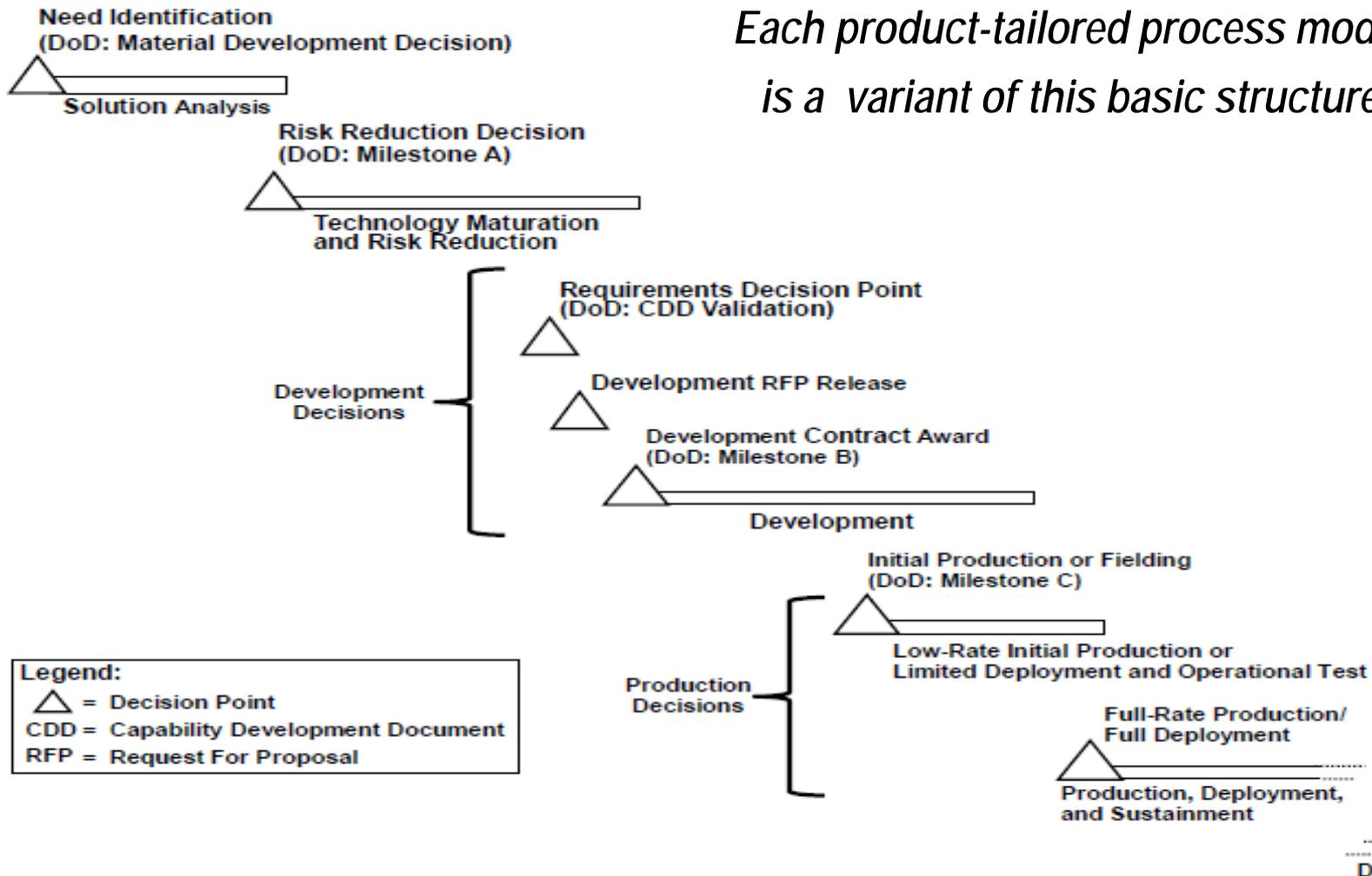
REVISED TABLE FORMAT FOR MILESTONE REQUIREMENTS

Table 2. Milestone and Phase Information Requirements

INFORMATION REQUIREMENT	PROGRAM TYPE ¹			LIFE-CYCLE EVENT ^{1,2,3}								SOURCE	APPROVAL AUTHORITY
	MDAP	MAIS	ACAT	MDD	MS A	CDD Val	Dev RFP Rel	MS B ⁵	MS C	FRP/FD Dec	OTHER		
			II ≤ III										
ACQUISITION STRATEGY	•	•	• •		•		•		✓	✓		SEC. 803, P.L. 107-314 (Ref. (j)) Para. 6a of Enc. 2 of this instruction	MDA
<p>STATUTORY for MDAPs at Milestone A; Regulatory for all other program types at all marked events including MDAPs after Milestone A. The Acquisition Strategy will include STATUTORY and Regulatory information. Major changes to the plan reflected in the Acquisition Strategy require MDA approval. The following STATUTORY requirements will be satisfied in the Acquisition Strategy:</p> <ul style="list-style-type: none"> • BENEFIT ANALYSIS AND DETERMINATION: STATUTORY; applies to bundled acquisitions only. Includes MARKET RESEARCH to determine whether consolidation of the requirements is necessary and justified. Required at Milestone C if there was no Milestone B; an update is not required at the FRP/FD decision point. 15 U.S.C. 632 (Reference (j)) defines a bundled contract as a contract that is entered into to meet requirements that are consolidated in a bundling of contract requirements. The term "bundling of contract requirements" means consolidating two or more procurement requirements for goods or services previously provided or performed under separate smaller contracts into a solicitation of offers for a single contract that is likely to be unsuitable for award to a small-business concern. SOURCE(S): 15 U.S.C. 644(e) (Ref. (j)), 15 U.S.C. 657q (Ref. (j)) • CONSIDERATION OF TECHNOLOGY ISSUES: STATUTORY. Promotes, monitors, and evaluates programs for the communication and exchange of technological data. Not required below ACAT II nor after the Development RFP Release. For urgent needs, expedited consideration of technology issues will be reviewed during the COURSE OF ACTION ANALYSIS. SOURCE(S): 10 U.S.C. 2364 (Ref. (g)) • CONTRACT-TYPE DETERMINATION: STATUTORY. Satisfied when the MDA approves the Acquisition Strategy with specified contract types. Only required for MDAPs at Development RFP Release and Milestones B and C. The MDA for an MDAP may conditionally approve the contract type selected for a development program at the Development RFP Release Decision Point, and give final approval at the time of Milestone B approval. The development contract type must be consistent with the level of program risk and may be either a fixed price or cost type contract. If selecting a cost-type contract, the MDA must comply with the conditions and reporting requirements listed in Table 6 in this enclosure. The DoD MAY NOT enter into cost-type contracts for production of an MDAP unless compliant with the conditions and notifications listed in Table 6. SOURCE(S): SEC. 818, P.L. 109-364 (Ref. (k)), SEC. 811, P.L. 112-239 (Ref. (l)) • COOPERATIVE OPPORTUNITIES: STATUTORY. Only due at the first program milestone review. The requirement for a Cooperative Opportunities Document will be satisfied via the International Involvement section in the Acquisition Strategy outline. For programs responding to urgent needs, proven capabilities will be assessed during the COURSE OF ACTION ANALYSIS. SOURCE(S): 10 U.S.C. 2350a (Ref. (g)), SEC. 243, P.L. 111-383 (Ref. (m)) • GENERAL EQUIPMENT VALUATION: STATUTORY; a program description that identifies contract-deliverable military equipment, non-military equipment, and other deliverable items; includes plan(s) to ensure that all deliverable equipment requiring capitalization is serially identified and valued. Only required at Milestone C; updated as necessary for the FRP/FD Decision. The capitalization thresholds are unit costs at or above \$1 million for Air Force and Navy general fund assets, and unit costs at or above \$250 thousand for all internal use software and for other equipment assets for all other general and working capital funds. SOURCE(S): P.L. 101-576 (Ref. (n)), Statement of Federal Financial Accounting Standards 23 (Ref. (o)) • INDUSTRIAL BASE CAPABILITIES CONSIDERATIONS: STATUTORY for MDAPs; Regulatory for others. Summarizes the results of the industrial base capabilities' analysis. SOURCE(S): 10 U.S.C. 2440 (Ref. (g)) • INTELLECTUAL PROPERTY (IP) STRATEGY: STATUTORY for major weapon systems and subsystems; Regulatory for other program types. The IP Strategy must be updated as appropriate to support and account for evolving IP considerations associated with the award and administration of all contracts throughout the system life cycle. Becomes part of the Life-Cycle Sustainment Plan (LCSP) during Operations and Support (O&S). For programs responding to urgent needs, due at the Development Milestone. SOURCE(S): 10 U.S.C. 2320 (Ref. (g)), Para. 6a(4) of Enclosure 2 of this instruction • MARKET RESEARCH: STATUTORY. A stand-alone, Regulatory requirement at MDD. STATUTORY updates (as part of the ACQUISITION STRATEGY) required at Milestone A and the Development RFP release point; not required thereafter. Conducted to reduce the duplication of existing technologies and products, and to understand potential materiel solutions, technology maturity, and potential sources, to assure maximum participation of small business concerns, and possible strategies to acquire them. For programs responding to urgent needs, included in the Course of Action Approach at the Development Milestone. SOURCE(S): 10 U.S.C. 2377 (Ref. (g)), 15 U.S.C. 644(e)(2) (Ref. (j)), This instruction • SMALL BUSINESS INNOVATION RESEARCH (SBIR)/SMALL BUSINESS TECHNOLOGY TRANSFER (STTR) PROGRAM TECHNOLOGIES: STATUTORY. Program managers will establish goals for applying SBIR and STTR technologies in programs of record and incentivize primes to meet those goals. For contracts with a value at or above \$100 million, program managers will establish goals for the transition of Phase III technologies in subcontracting plans and require primes to report the number and dollar amount of Phase III SBIR or STTR contracts. Not required at Milestone B. SOURCE(S): 15 U.S.C. 638 (Ref. (j)) • TERMINATION LIABILITY ESTIMATE: STATUTORY. Only for MDAPs. Must be documented in the ACQUISITION STRATEGY for any contract for the development or production of an MDAP for which potential termination liability could reasonably be expected to exceed \$100 million. Updates may therefore be required at other than the marked events. The estimate must include how such termination liability is likely to increase or decrease over the period of performance. The Program Manager must consider the estimate before making recommendations on decisions to enter into or terminate such contracts. SOURCE(S): SEC. 812, P.L. 112-239 (Ref. (l)) 													

GENERIC ACQUISITION AND PROCUREMENT MILESTONES & DECISION POINTS

Each product-tailored process model is a variant of this basic structure



DODI 5000.02 PROCESS FLEXIBILITY

- The program structure and procedures used should be tailored to the characteristics / specifics of the product being acquired, and to the totality of circumstances associated with the program including urgency and risk factors.
- MDAs authorized to tailor the regulatory requirements and acquisition procedures to more efficiently achieve program objectives, consistent with statutory requirements and DoD Directive 5000.01.
- When there is a strong threat-based or operationally driven need to field a capability solution in the shortest time, **MDAs are authorized to implement streamlined procedures** designed to accelerate acquisition system responsiveness.
- Statutory requirements will be complied with, unless waived in accordance with relevant provisions.

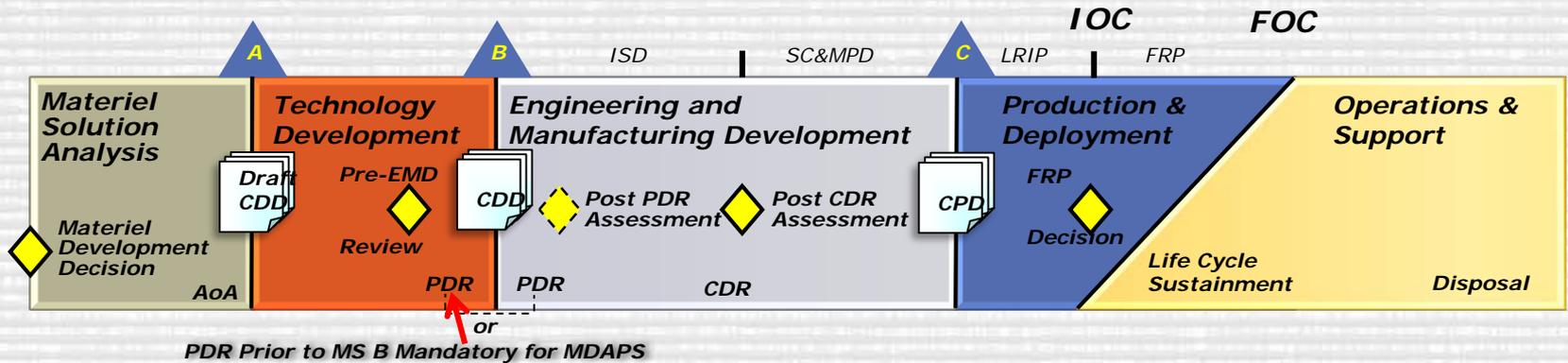
ACQUISITION CATEGORIES (ACAT) WEAPONS/C4I SYSTEMS

CATEGORY	DECISION AUTHORITY	CRITERIA (FY 14 Constant Dollars)
ACAT I (MDAP)	ACAT ID – DAE or as delegated ACAT IC – Head of DoD Component or delegate to CAE (no lower)	\$480M RDT&E or \$2.79B Procurement; or MDA designates as MDAP; MDA designates special interest
ACAT IA (MAIS)	ACAT IAM – DAE or as delegated ACAT IAC – Head of DoD Component or delegate to CAE (no lower)	\$40M total expenditures in any single FY; or \$165M total expenditures from MSA Phase through deployment at all sites; or \$520M total expenditures from MSA Phase through sustainment for estimated useful life; or MDA designates special interest
ACAT II (Major System)	CAE (or designee)	Does not meet criteria for ACAT I or IA; \$185M RDT&E or \$835M Procurement ;or MDA designation as Major System
ACAT III	Designated by CAE	Does not meet criteria for ACAT II or above; An AIS program that is not an MAIS

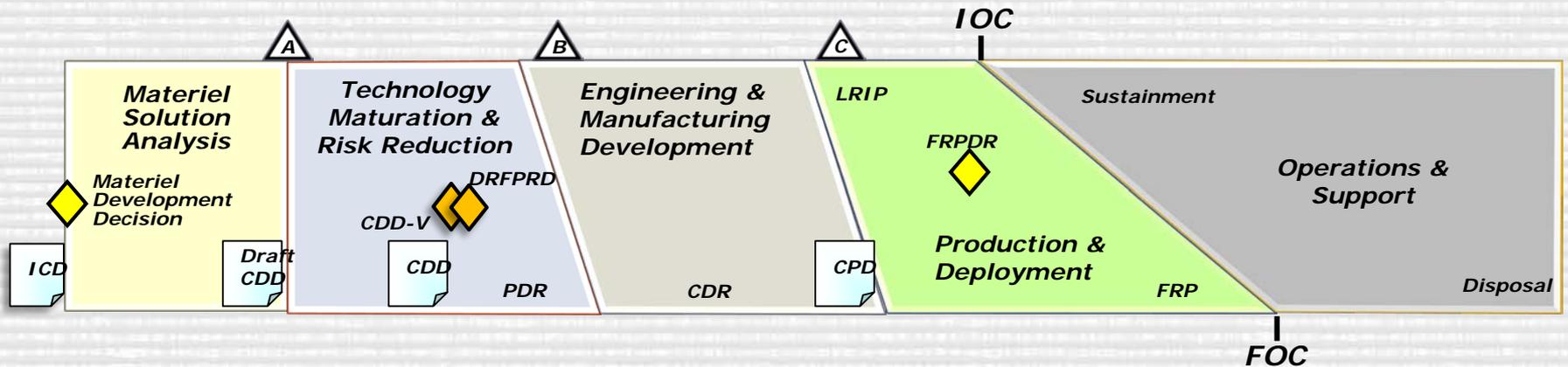


THE DEFENSE ACQUISITION MANAGEMENT SYSTEM – FROM THERE TO HERE

2008



2015 (Model 1: Hardware Intensive Program)

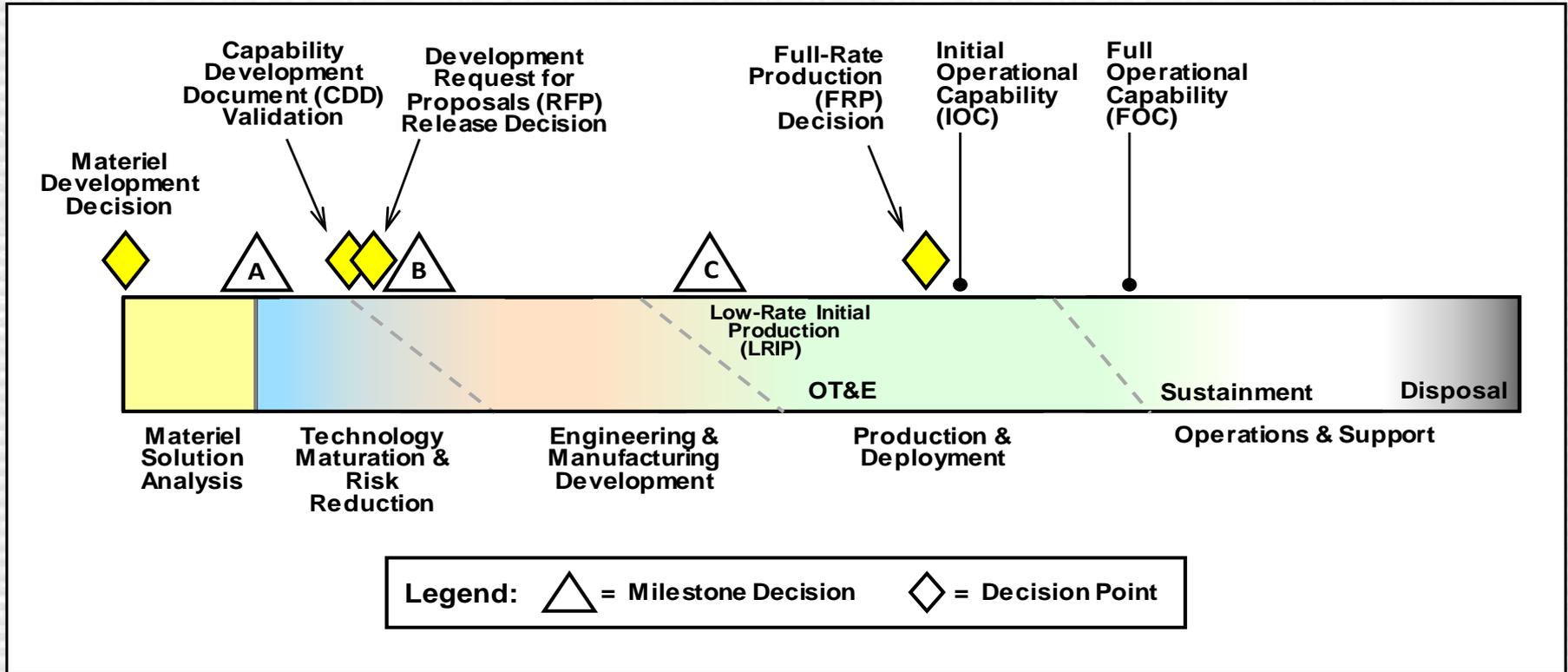


PRODUCT-TAILORED ACQUISITION MODELS

- Model 1: Hardware Intensive Program
- Model 2: Defense Unique Software Intensive Program
- Model 3: Incrementally Deployed Software Intensive Program
- Model 4: Accelerated Acquisition Program
- Model 5: Hybrid Program A (Hardware Dominant)
- Model 6: Hybrid Program B (Software Dominant)

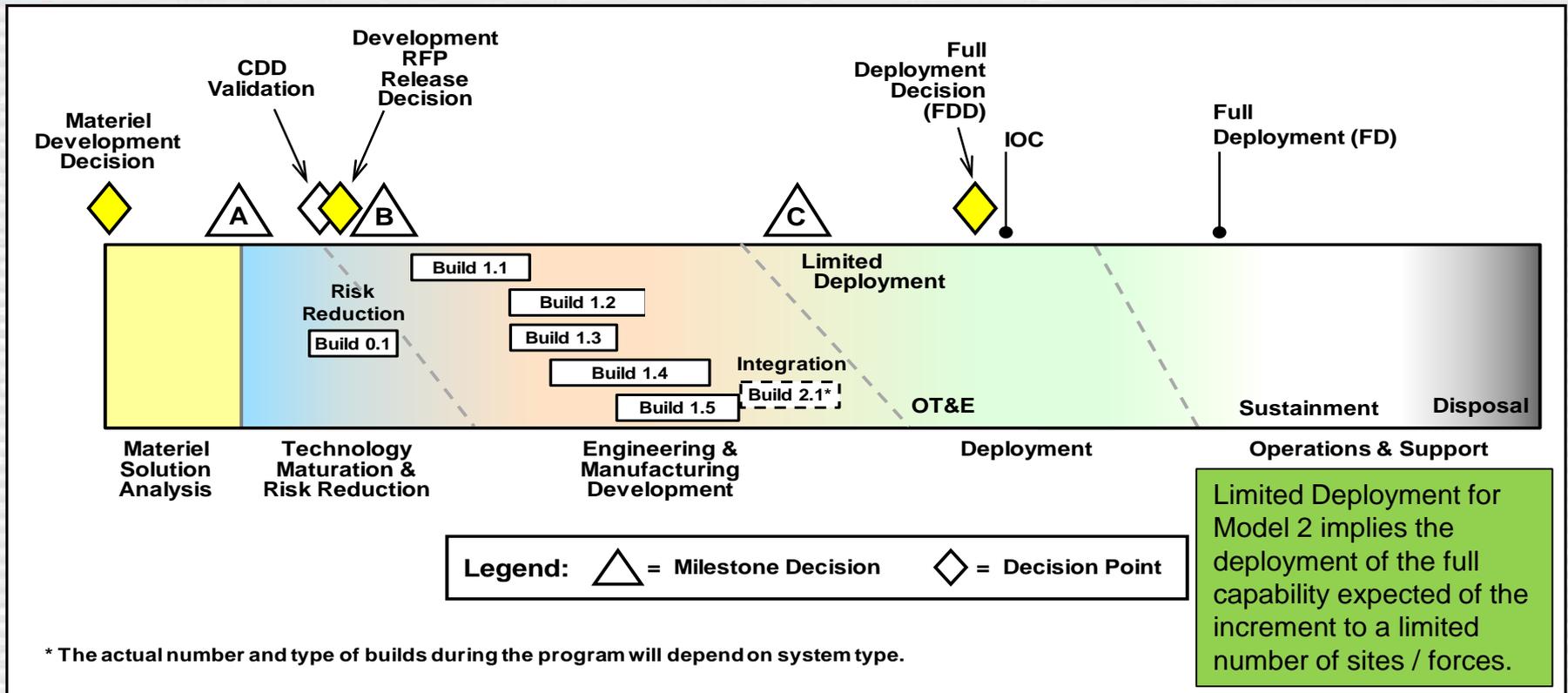
Each basic model is tailored to the dominant characteristics of the product being acquired (e.g., hardware intensive products such as most weapon systems).

MODEL 1: HARDWARE INTENSIVE PROGRAM



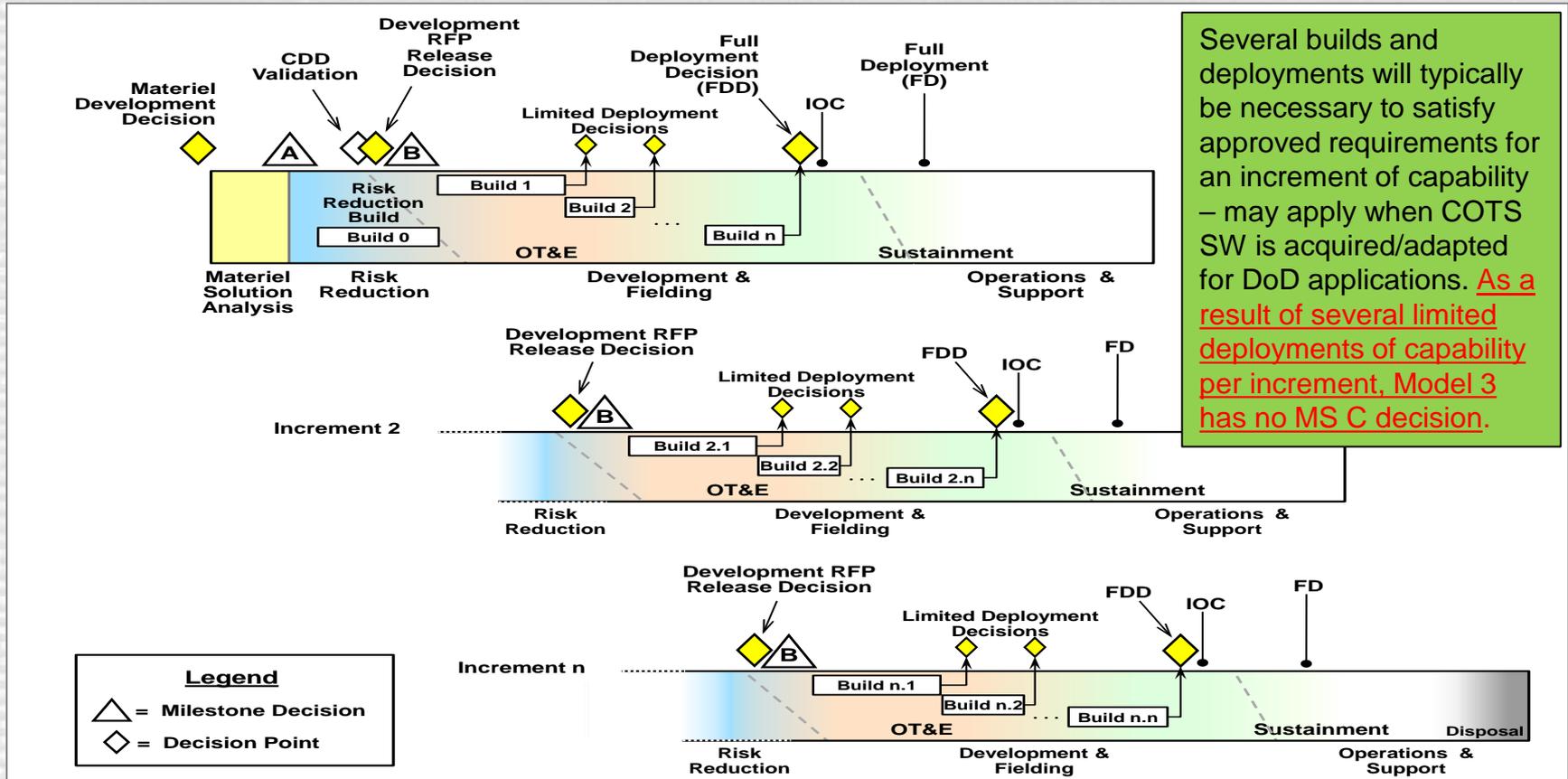
- HW intensive development program such as [a major weapons platform](#) - this is the “classic” model that has existed in some form in all previous iterations of the DoDI 5000.02
- It is the “starting point” for most military weapon systems; however, these products almost always contain software development resulting in some form of Hybrid Model A

MODEL 2: DEFENSE UNIQUE SOFTWARE INTENSIVE PROGRAM



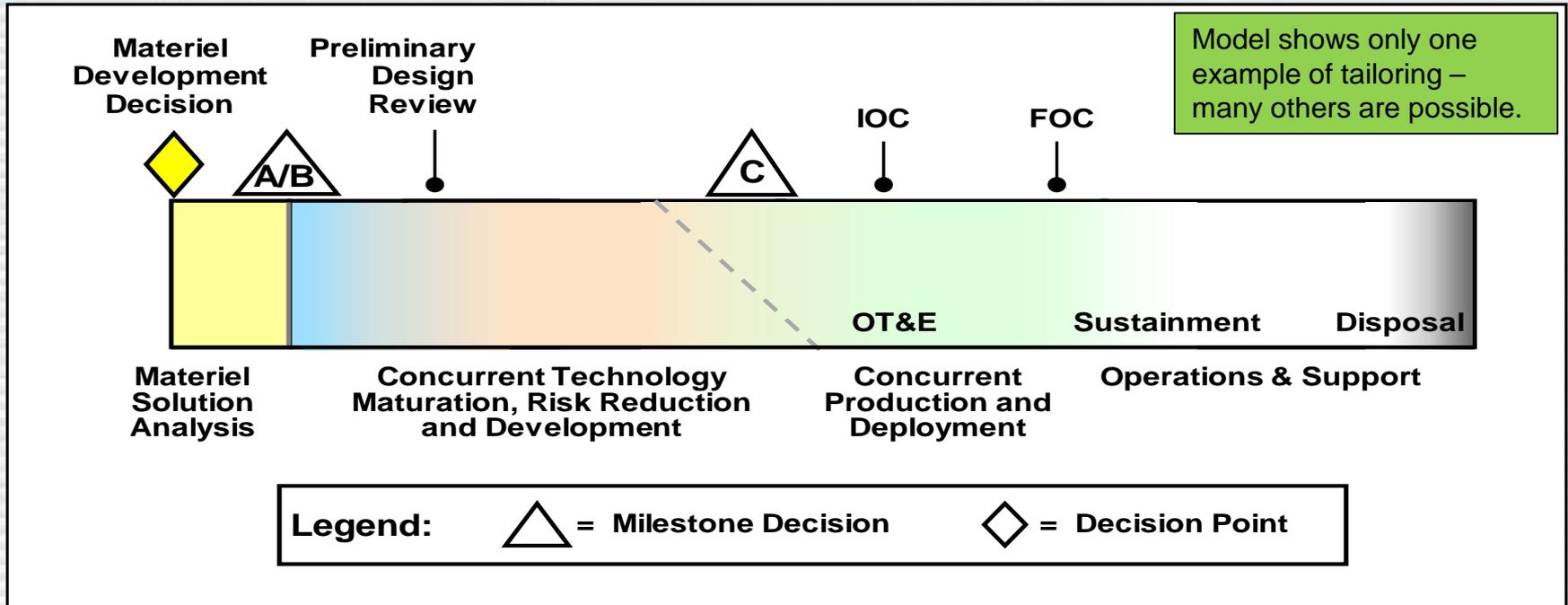
- Dominated by the need to develop a complex, usually defense unique, software program that will not be deployed until several software builds have been completed.
- The central feature of this model is the planned software builds – a series of testable, integrated subsets of the overall capability – e.g., military C2 systems, significant upgrades to combat systems on major weapons platforms – surface combatants, tactical aircraft, etc.

MODEL 3: INCREMENTALLY DEPLOYED SOFTWARE INTENSIVE PROGRAM



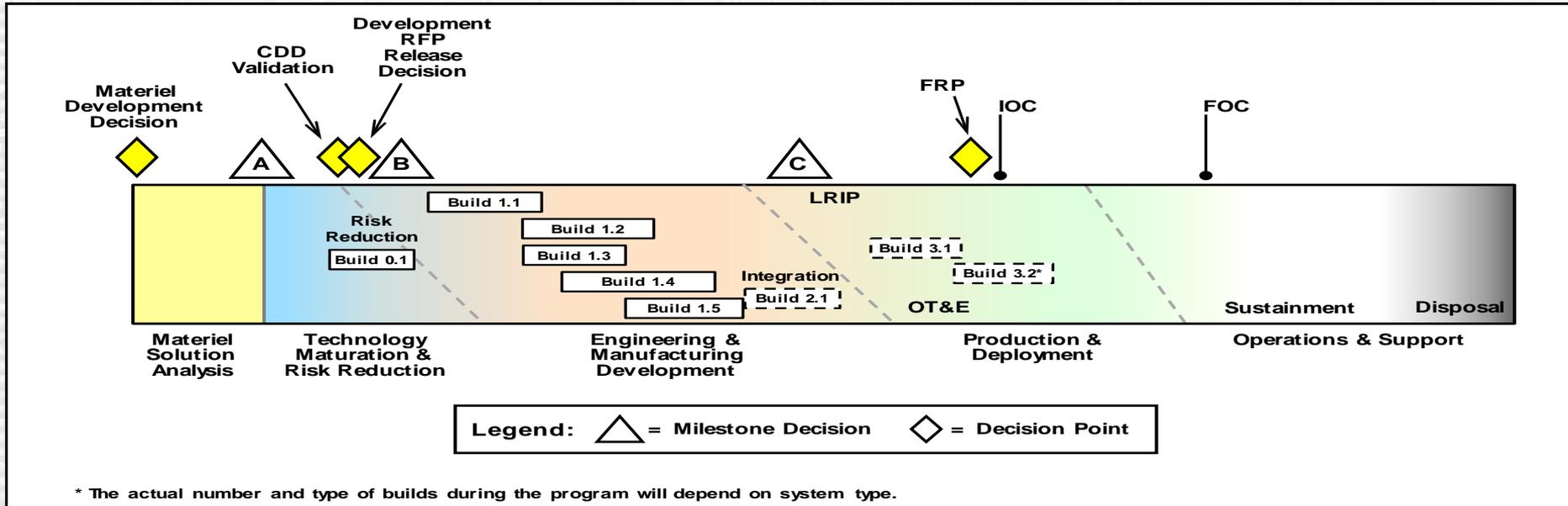
- Rapid delivery of capability through multiple acquisition increments, each of which provides part of the overall capability. Each increment may have several limited deployments; each deployment will result from a specific build, and provide the user with mature and tested sub-elements of the overall incremental capability.

MODEL 4: ACCELERATED ACQUISITION PROGRAM



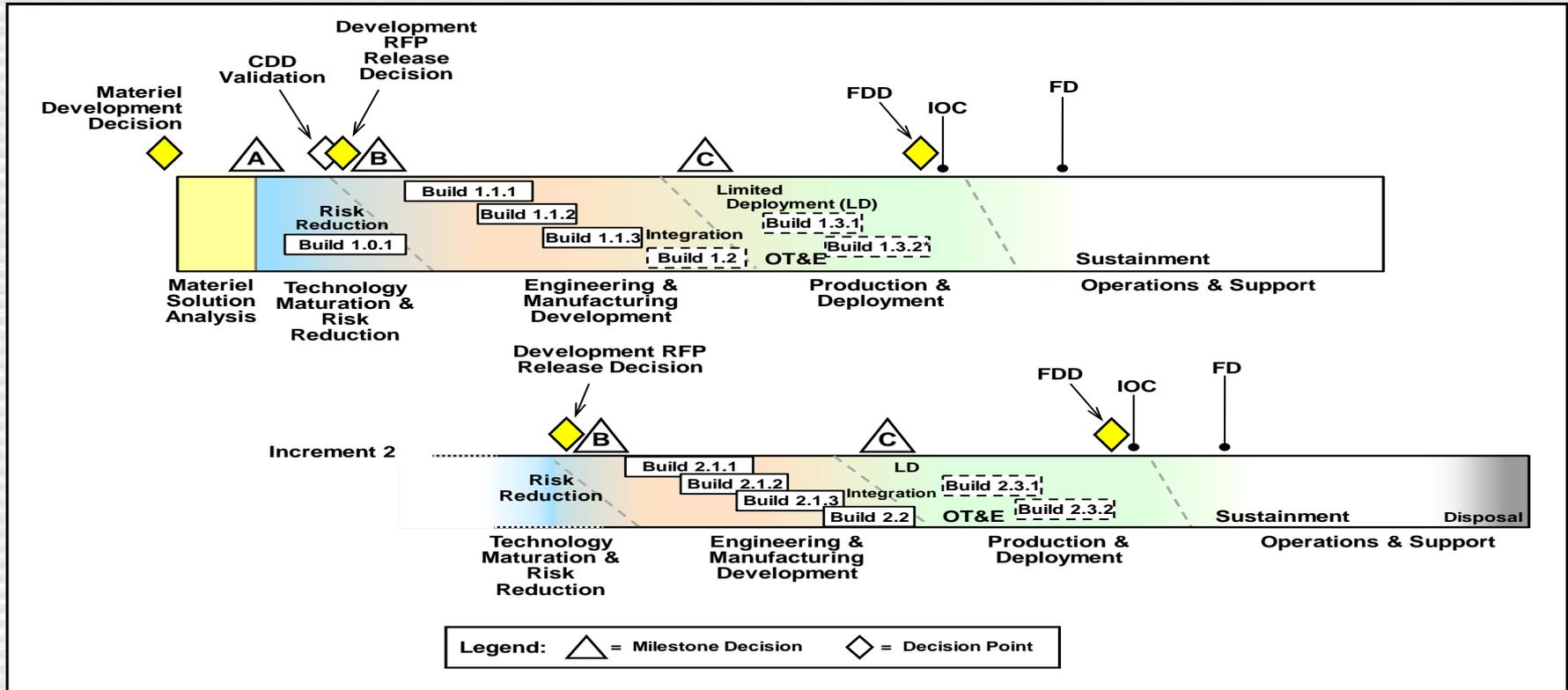
- When schedule considerations dominate over cost and technical risk considerations.
- Compresses or eliminates phases of the process in order to achieve a deployed capability on a compressed schedule.
- For products that must be developed and acquired as quickly as possible, usually motivated by a potential adversary achieving technological surprise, and featuring a greater acceptance of program risk.

MODEL 5: HYBRID PROGRAM A (HW DOMINANT)



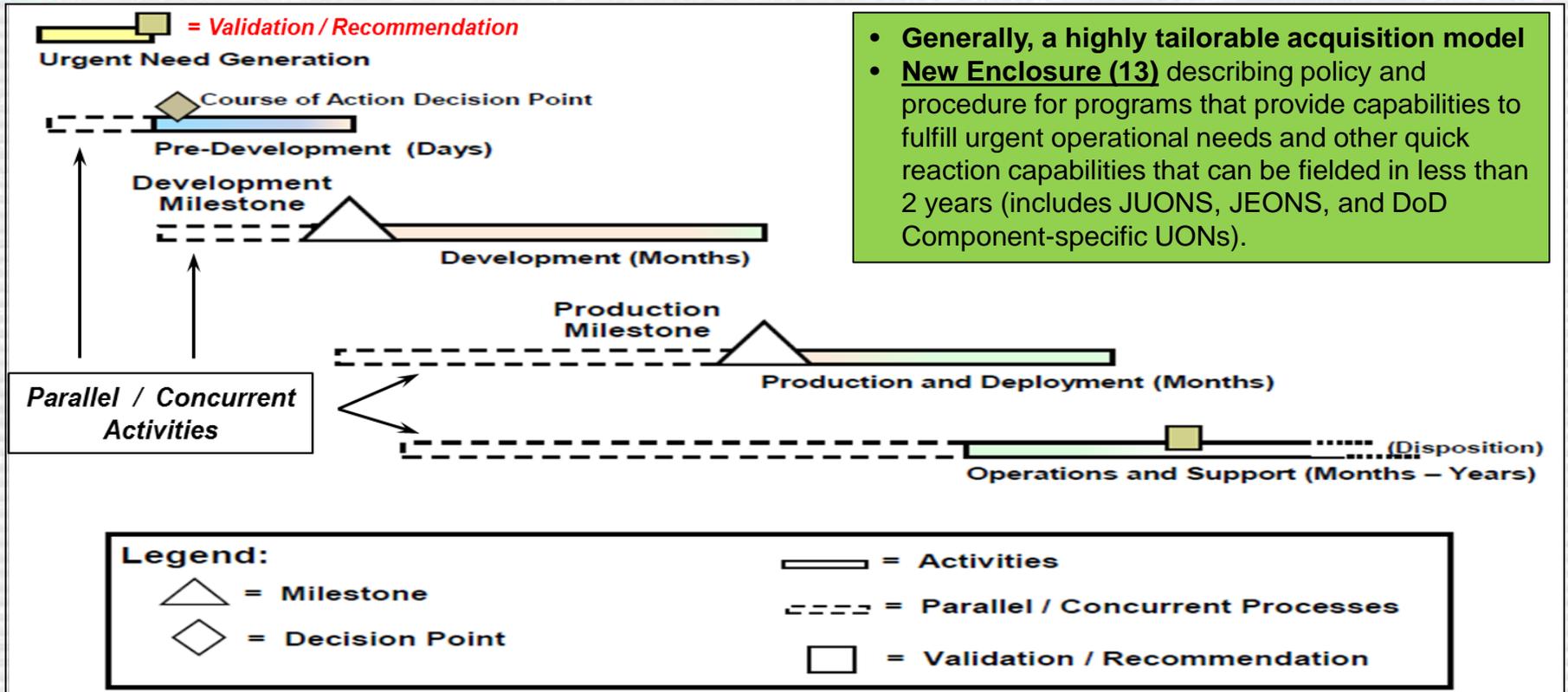
- Depicts how a major weapons system combines HW development as the basic structure with a SW intensive development that is occurring simultaneously
- The design, fabrication, and testing of physical prototypes may determine overall schedule, decision points, and milestones, but SW development will often dictate the pace of program execution and must be tightly integrated and coordinated with HW development decision points
- SW development is a series of testable SW builds leading up to the full capability needed to satisfy program requirements and Initial Operational Capability (IOC).

MODEL 6: HYBRID PROGRAM B (SW DOMINANT)



- SW intensive product development that includes [a mix of incrementally fielded SW products or releases that include intermediate SW builds](#)
- For Hybrid (HW & SW) models, [highly integrated and complex HW and SW development will pose special risks to C/S/P](#). These risks must be actively managed throughout program's life cycle and will be a topic of special interest at all reviews, decision points and milestones.

RAPID FIELDING OF CAPABILITIES



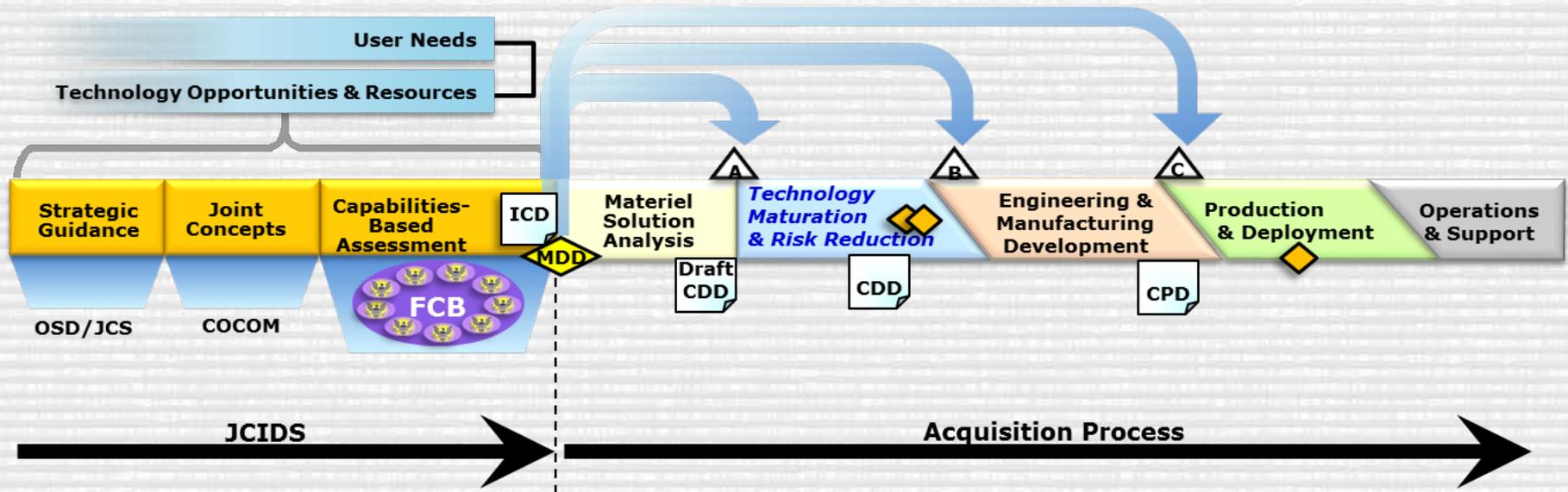
- Generally, a highly tailorable acquisition model
- **New Enclosure (13)** describing policy and procedure for programs that provide capabilities to fulfill urgent operational needs and other quick reaction capabilities that can be fielded in less than 2 years (includes JUONS, JEONS, and DoD Component-specific UONs).

- Applicable to UONs that fall **below** the cost threshold for ACAT I and IA programs that can be fielded in **less than 2 years**.
- **Intended to expedite urgent needs by tailoring the documentation and reviews normally required as a part of the deliberate acquisition process.**

GETTING TO A MATERIAL DEVELOPMENT DECISION (MDD)

User Needs: JCIDS Capabilities-Based Assessment (CBA) leading to an Initial Capabilities Document (ICD)

Technology Opportunities: All sources foreign & domestic - SBIR Programs - S&T Activities - ATDs, JCTDs - Qualified Prototype Projects - Joint Warfighting Experiments



“If the Materiel Development Decision is approved, the MDA will designate the lead DoD Component; determine the acquisition phase of entry; and identify the initial review milestone.”

MATERIEL DEVELOPMENT DECISION (MDD)

DOTMLPF-P analysis has determined that a new materiel solution is needed and analyzing of the alternatives will now occur...

MDD is the approval to enter the Acquisition Process

- Milestone Decision Authority (MDA):
 - Determines the acquisition phase of entry
 - Identifies initial review milestone
 - Designates the Lead DoD Component
 - Issues Acquisition Decision Memorandum (ADM)
- Information Requirements:
 - Initial Capabilities Document (ICD)
 - Evidence of strong technical foundation
 - AOA Study Guidance and AOA Study Plan

MATERIEL SOLUTION ANALYSIS PHASE

Purpose: Assess potential materiel solutions

Guided by: Validated ICD, AoA Study

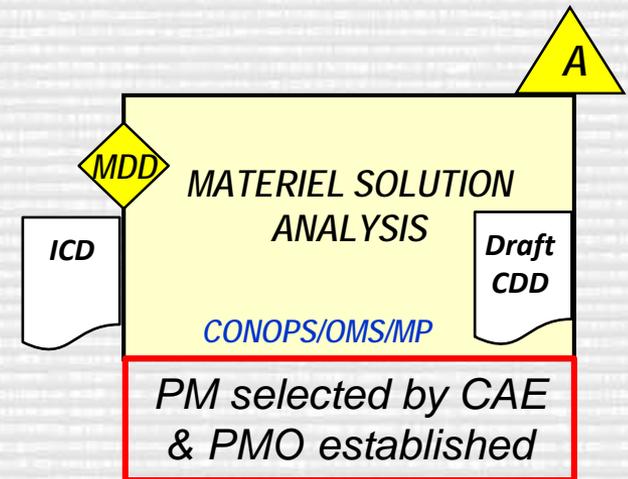
Guidance & AoA Study Plan

Major Activities:

- Conduct AoA
- Develop Acquisition Strategy (AS)
- Draft Capabilities Development Document (CDD)

Minimum Funding: For all Phase Activities and to support MS A decision

Phase is Complete When: MDA approves materiel solution and AS

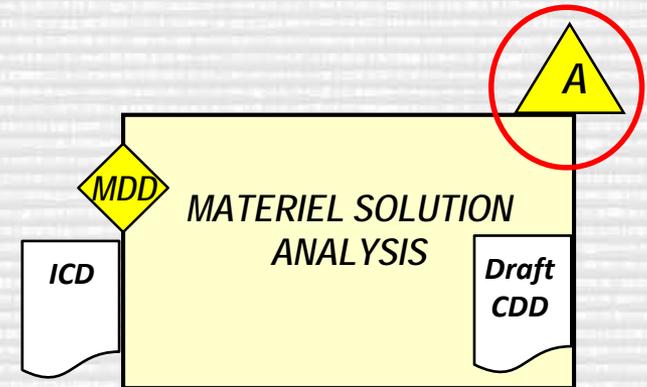


NOTE: CONOPS/Operational Mode Summary/Mission Profile (OMS/MP): Prepared by the Component combat developer Prior to MS A. Describes the operational tasks, events, durations, frequency and environment in which the materiel solution is expected to perform each mission. Provided to the PM to inform development of the plans for the next phase including: acquisition strategy, test planning, and capability requirements trades. It will be provided to industry as an attachment for the next acquisition phase RFP.

MILESTONE A (MS A)

Program Manager (PM) presents:

- Acquisition Strategy (AS)
 - Must be approved by MDA prior to RFP release for TMRR activities
 - Key Framing Assumptions
 - Business Approach & Risk Management
 - Competition
 - Intellectual Property (IP) Strategy
 - Program Baseline Development (APB)
 - Earned Value Management
 - Appropriate Cost Baseline Control & Use of “Should Cost” Management



Component (Service/Agency):

- Presents affordability analysis and affordability goals (included in ADM)
- Submits Component cost estimate for preferred solution
- Demonstrated that the program will be fully funded in FYDP
- Acquisition Strategy

Milestone Decision Authority (MDA):

- Makes a determination on the material solution, release of RFP for TMRR activities, and establishes exit criteria for TMRR Phase (included in ADM)

NOTE: The Component, **not the acquisition community**, conducts the affordability analysis (nominally 30-40 year period).

PROGRAM CERTIFICATION FOR MS A (PER 10 U.S.C. 2366A)

MDA certifies that:

- The program fulfills an **approve ICD**
- The program is being **executed by an entity with a relevant core competency** as identified by the Secretary of Defense
- If the system duplicates a capability already provided by an existing system, **the duplication provided** by this system is necessary & appropriate
- A determination of applicability of **core depot-level maintenance** and repair capabilities requirements has been made
- An **AoA has been performed** consistent with the study guidance developed by the Director of Cost Assessment and Program Evaluation (D,CAPE)
- A **cost estimate** for the program has been submitted, with the concurrence of the **D,CAPE**, and the level of resources required to develop and procure the program is consistent with the **priority level** assigned by the JROC

TECHNOLOGY MATURATION & RISK REDUCTION (TMRR)

Purpose:

- Reduce Technology, Engineering, Integration, and Life Cycle Cost Risks
- Demonstrate Critical Technologies on Prototypes
- Complete Preliminary Design
- Draft Capabilities Development Document (CDD)

Basis for Entry: MDA approved material solution and AS (and other initial major program documentation)

Guided by: ACD, Acquisition Strategy, SEP and Draft CDD (or Approved CDD)

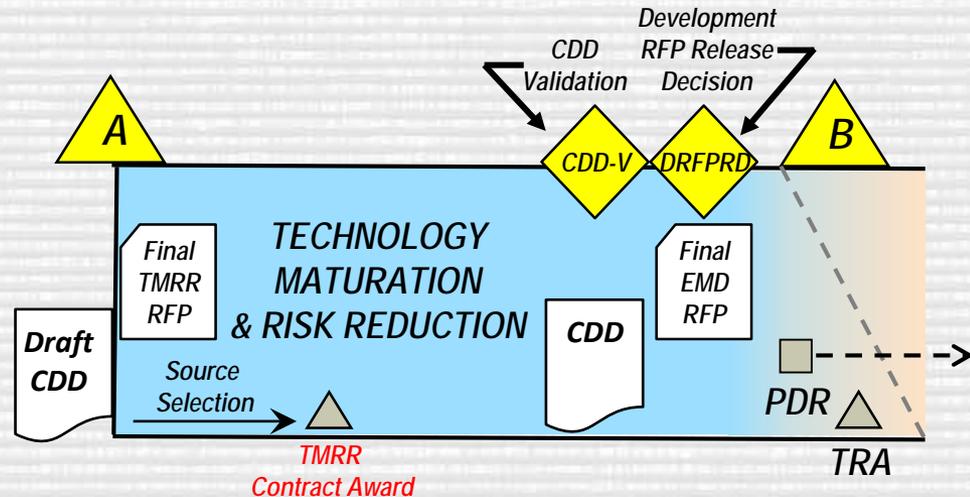
Major Activities:

- Competitive prototyping*; SE trade-off analysis, CDD Validation (CDD-V); Preliminary Design Review (PDR)
- Development RFP Release Decision, begin Source Selection process for EMD phase
- Plan for Life Cycle Sustainment, Technology Readiness Assessment

Minimum Funding: Full funding in FYDP

Phase is Complete When:

- Technology, Engineering, Integration, Manufacturing, Sustainment and Cost risks have been adequately mitigated to support a commitment to design for production;
- Validated capability requirements, affordable increment of military-useful capability has been identified;
- PDR conducted prior to Milestone B (unless waived by MDA), Technology demonstrated in a relevant environment;
- Compliance with affordability goals for production and sustainment

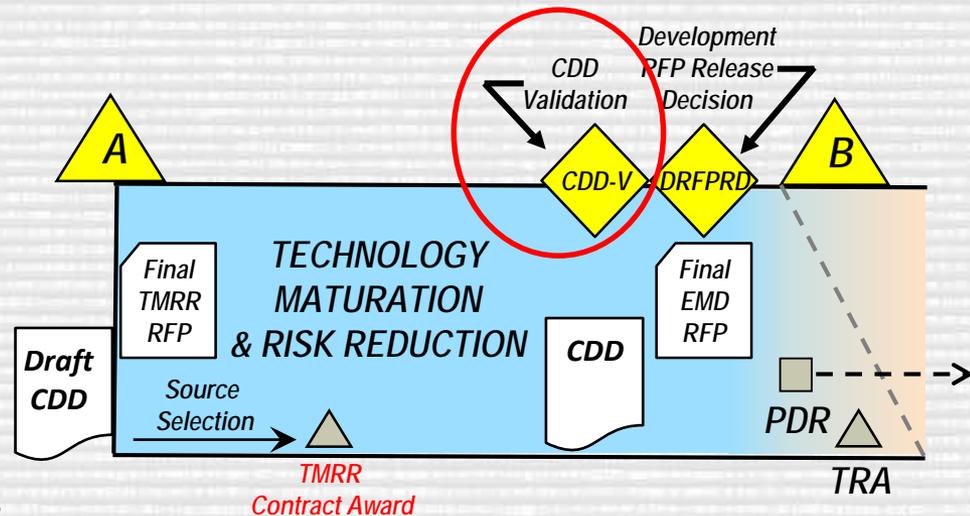


***NOTE – Competitive prototyping** of the system, or critical sub-systems, is a **statutory** requirement for Major Defense Acquisition Programs (MDAPs) (ACAT ID/IC) and a **regulatory** requirement for all other programs.

TMRR – CAPABILITY DEVELOPMENT DOCUMENT VALIDATION (CDD-V)

CDD-Validation (CDD-V):

- Requirements validation authority validates the CDD
- **Major cost-performance trades have been completed**
- Risk reduction efforts sufficient to support preliminary design activities



MDA and/or CAE & Requirements Leadership ensure that:

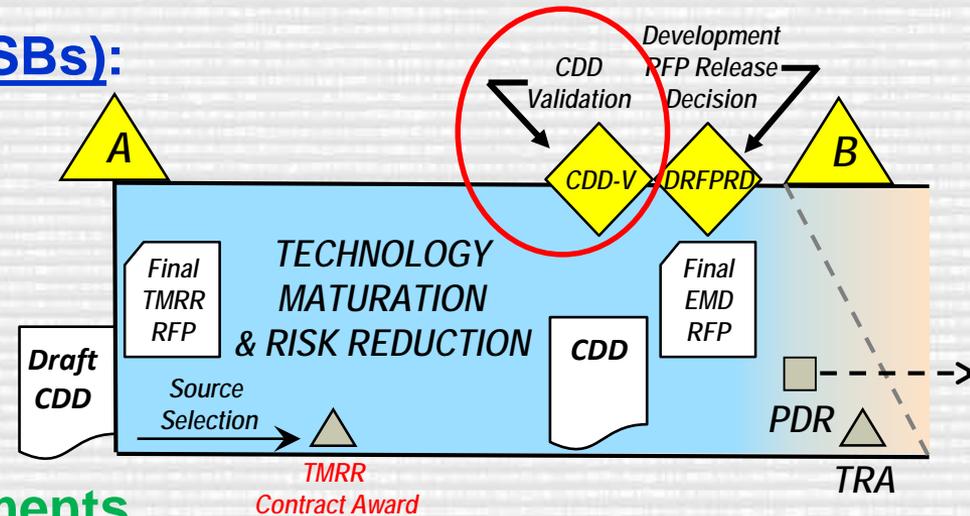
- Validated requirements continue to address the priorities of the users in cost effective and affordable way
- Requirements are achievable, affordable, and testable
- Requirements trades are fully informed by the systems engineering trade-off analysis completed by the PM or the DoD Component

KPPs and KSAs in the CDD guide efforts leading to PDR and inform the RFP Release Decision Point (DRFPRD)

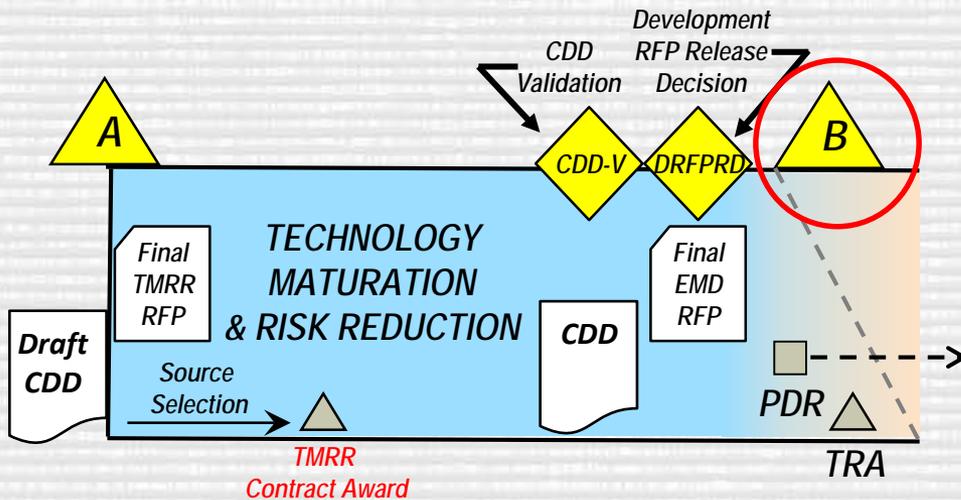
TMRR – CDD-V (CONT.)

Configuration Steering Boards (CSBs):

- Formed and **Chaired by CAE** after CDD validation for ACAT I & IA programs
- Meets annually to review potential requirement changes and to **propose to the requirements validation authority those changes that may be necessary to achieve affordability constraints** on production and sustainment costs, or that will result in a more effective product
- Changes that increase cost will not be approved unless funds are identified and schedule impacts have been addressed



TMRR – PDR AND MILESTONE B



Milestone B (MS B)

- Authorizes entry into and contract award for EMD efforts
- **Formal initiation of the program**
- Requires demonstration that all sources of risk have been adequately mitigated
- **MDA approves APB** as the agreement between the MDA, PM, and Component chain of command
 - **Affordability caps set in APB as equivalent to KPPs**
- LRIP quantities / Scope of Limited Deployment finalized
- Initial Independent Logistics Assessment (ILA) conducted

Preliminary Design Review (PDR)

- Prior to MS B and before contract award for EMD efforts, unless waived* by the MDA
**(Without waiver, DoD would be unable to meet critical national security objectives)*
- Results assessed by the MDA prior to required 10 U.S.C. 2366b Certification

PROGRAM CERTIFICATION FOR MS B (PER 10 U.S.C. 2366B)

MDA certifies that:

- The program is **affordable** and that appropriate cost, schedule, and performance **trade-offs have been made**
- Reasonable **cost and schedule estimates** have been developed
- **Funding is available** to execute the development and production plan
- **PDR** and formal Post-PDR assessment complete
- the program demonstrates a high likelihood of accomplishing its intended mission
- Appropriate **market research** has been conducted
- DoD has completed **an AoA**
- **JROC** has accomplished its duties IAW 10 U.S.C. 181(b)
- Program technology has been **demonstrated in a relevant environment**
- **Life-cycle sustainment planning**, including CPC and mitigation planning, has identified and evaluated relevant sustainment costs, and that such costs are reasonable and have been accurately estimated
- **Core depot-level maintenance** and repair capabilities requirements have been estimated
- Program complies with all relevant policies, regulations, and directives of Dept of Defense

ENGINEERING & MANUFACTURING DEVELOPMENT PHASE

Purpose – Develop, build, and test a product:

- To verify that all operational and derived requirements have been met
- To support production and deployment decisions

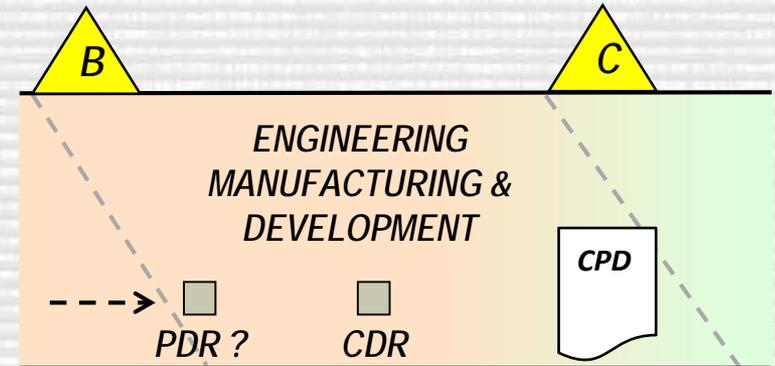
Basis for Entry:

- Adequate Risk Reduction complete
- Approved requirements (CDD)

Guided by: CDD, Acquisition Strategy, SEP, and TEMP

Major Activities:

- Complete HW and SW design; systematically retire any unmitigated risks
- Build/Test prototypes or first articles to **verify** compliance with requirements
- Complete TEMP DT&E activities; evaluate achievement of KPPs and KSAs
- Prepare for production, deployment, and sustainment; establish initial product baseline
- Ensure that production, deployment, and OT&E can be supported
- Ensure system design and product support package meet sustainment requirements within affordability caps



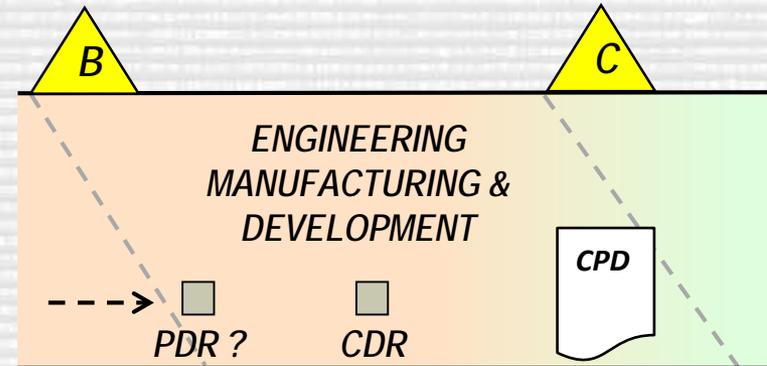
- **PDR** – If PDR prior to MS B was waived, the PM will plan / conduct a PDR as soon as feasible after program initiation. For ACAT I and IA programs, the DASD (SE) will participate in the Program's PDR and CDR and conduct Post-CDR Assessment
- **DT / OT** – DT and OT activities should, *to the extent possible*, be planned in conjunction with one another to provide as efficient an overall test process as possible.

EMD PHASE (CONT.)

Minimum Funding: Full funding in FYDP

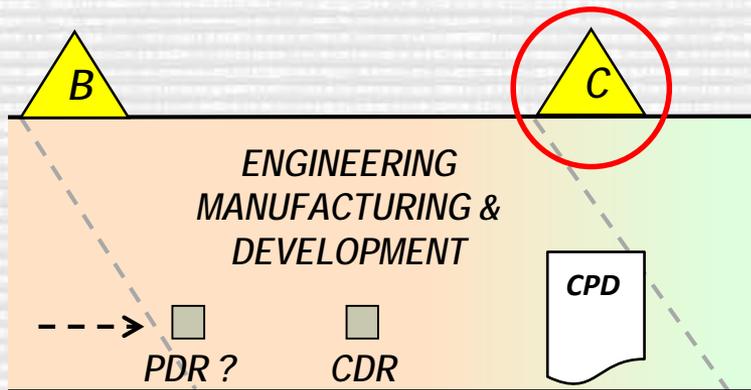
Phase is Complete When:

- Design is stable;
- System(s) meets validated requirements (demonstrated through DT and early OT);
- Manufacturing processes have been effectively demonstrated and are under control;
- Industrial production capabilities are reasonable available;
- Systems meets or exceeds all EMD Phase exit criteria and MS C entrance criteria;
- Compliance with affordability goals for production and sustainment



NOTE: – EMD will **often** continue past the initial production or fielding decision until all EMD activities have been completed and all requirements have been tested and verified.

MILESTONE C



Milestone C (MS C)

Authorizes entry into Production & Deployment phase – general criteria includes:

- Updated Acquisition Strategy
- Validate CPD
- Demonstration that design is stable & meets requirements based on performance in DT (as outlined in TEMP)
- Demonstrated Interoperability
- Demonstrated operational supportability
- Completed an Operational Assessment
- SW capability is mature
- No significant manufacturing risks
- Properly phased production ramp-up and/or fielding support
- Costs within affordability caps

- MDA also considers any new validated threat environments not already included in the CPD that might affect operational effectiveness and may consult with the Requirements validation authority to ensure requirements are current.
- High-Cost First Article Combined MS B and MS C Decisions (e.g., Ships & Spacecraft) – Prototypes are not produced as test articles. First articles produced, tested, and fielded as operational assets. Combine MS B and C conducted, development and initial production combined.

PRODUCTION & DEPLOYMENT

Purpose :

- To produce and deliver requirements-compliant
- Products to receiving military organizations

Basis for Entry:

- Approved requirements (CPD);
- Acceptable performance in DT & OA; Mature Software
- No significant manufacturing risks;
- Acceptable interoperability & operational supportability;
- Demonstration of affordability;

Guided by: CPD, Acquisition Strategy, SEP, TEMP and LCSP

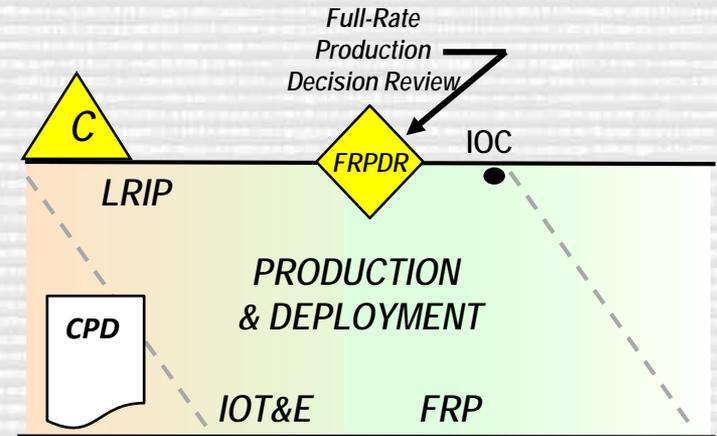
Major Activities:

- Low-Rate Initial Production (LRIP);
- Initial Operational Test & Evaluation (IOT&E); Live Fire Test & Evaluation (LFT&E) (if required);
- Interoperability Testing of Production Articles;
- Full-Rate Production Decision; Fielding and support of fielded systems;
- Initial Operational Capability (IOC) and Full Operational Capability (FOC)

Minimum Funding: Full funding in FYDP

Phase is Complete When:

- FOC achieved; deployment complete



PRODUCTION & DEPLOYMENT (CONT.)

Low-Rate Initial Production (LRIP) :

- Establishes initial production base;
- Provides OT&E test articles;
- Initiates efficient ramp-up to full-rate production;
- To produce and deliver requirements-compliant
- Maintains production continuity pending OT&E completion

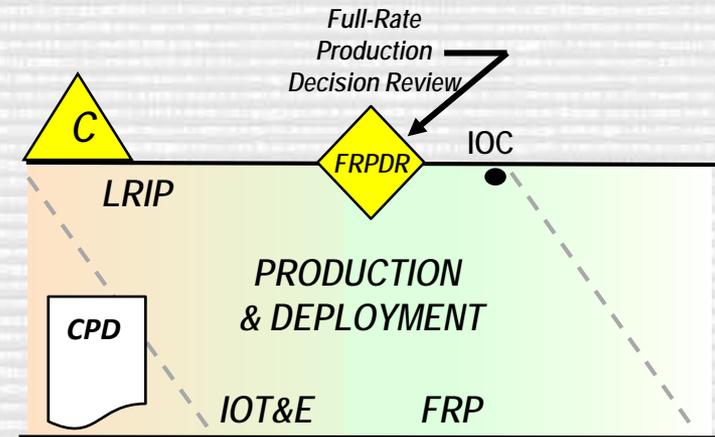
OT&E: Operational testing in a realistic threat environment to determine operational effectiveness, suitability, and survivability

Full Rate Production (FRP) Decision Review:

- Milestone Decision Authority approval requires control of the manufacturing processes;
- Acceptable performance and reliability;
- Establishment of adequate sustainment and support systems

FRP & Deployment: Production & deployment completion leading to Full Operational Capability (FOC)

Initial Operational Capability (IOC): Operational authority declares IOC when the defined organizations have been equipped and trained and are capable of conducting mission operation



OPERATIONS & SUPPORT

Purpose – Execute a support program that meets material readiness and operational support performance requirements, and sustains the system in the most cost-effective manner over its entire life cycle (including disposal).

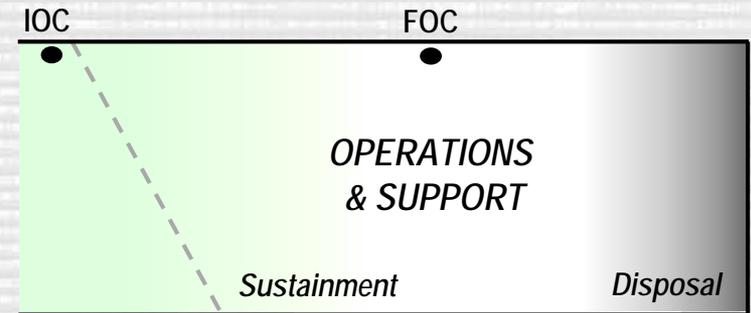
Basis for Entry:

- Approved requirements (CPD);
- Approved Life Cycle Sustainment Plan (LSCP);
- Successful FRP Decision)

Guided by: CPD, Acquisition Strategy, SEP, and LCSP

Major Activities:

- LCSP implementation;
- Performance-Based Life Cycle Product Support (PBL) planning, development, implementation, and management;
- Initiate system modifications (as necessary);
- Continuing reviews of sustainment strategies;
- Demilitarize and dispose of systems



Two Major Efforts

- **Life Cycle Sustainment** – PM deploys the support package IAW the LSCP. PM assures that resources are programmed and necessary Intellectual Property (IP) deliverable, data, tools, equipment, and facilities are acquired to support each maintenance level. Organic depot capability is established IAW the LCSP.
- **Disposal** – At the end of the system's service life. Systems are demilitarized and disposed IAW all legal and regulatory requirements and policies relating to safety, security, and the environment.

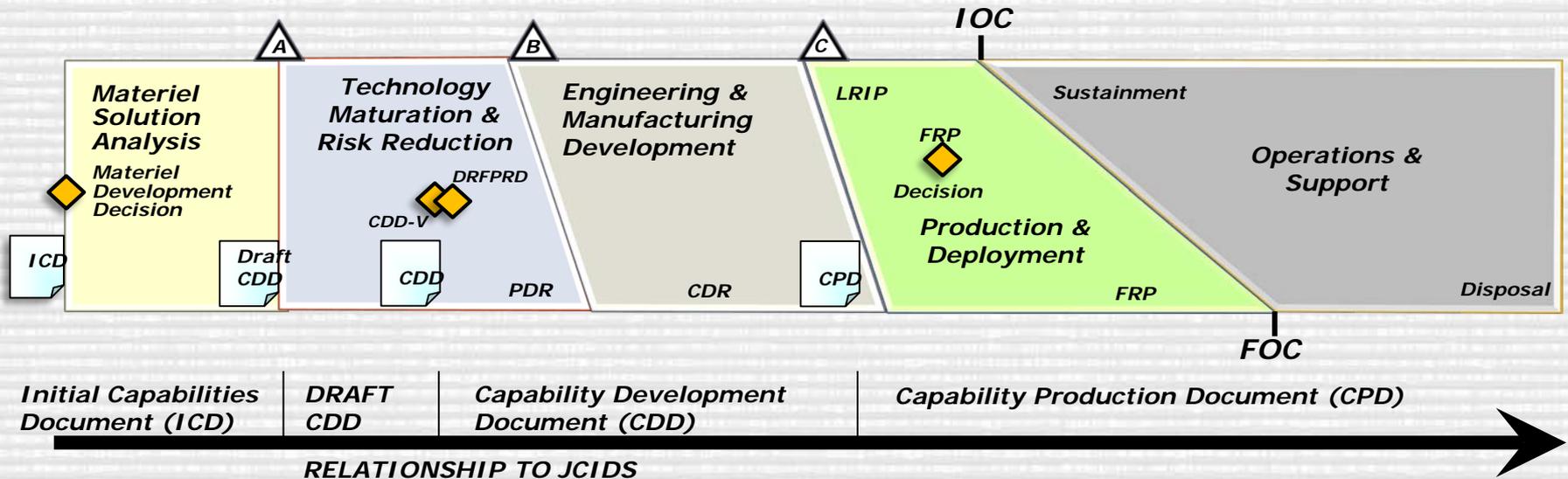
THE DEFENSE ACQUISITION MANAGEMENT SYSTEM

The Materiel Development Decision precedes entry into any phase of the acquisition management system

Entrance Criteria met before entering phase

Incremental Acquisition or Single Step to Full Capability

Model 1: Hardware Intensive Program



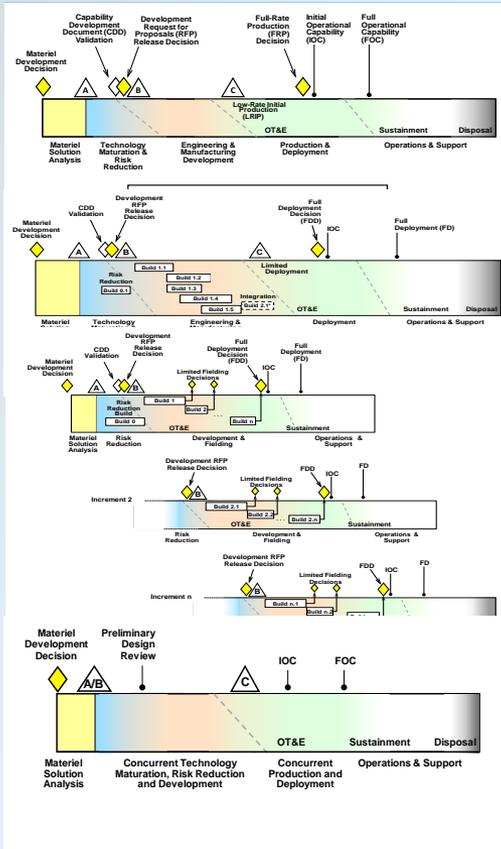
- PDR: Preliminary Design Review
- CDR: Critical Design Review
- CDD-V: CDD Validation

- LRIP: Low Rate Initial Production
- FRP: Full Rate Production
- DRFPRD: Development Request For Proposals Release Decision

- IOC: Initial Operational Capability
- FOC: Full Operational Capability

TAILORED APPLICABILITY

What Model best accommodates the product I'm developing?



How to use the Document

What business procedures apply to the program?

Material Development Decision

The Materiel Development Decision is based on a validated initial requirements document (an ICD or equivalent) and the completion of the AoA Study Guidance and AoA Study Plan. This decision directs execution of the AoA Study Guidance and AoA Study Plan, and authorizes the DoD Component to conduct the Materiel Solution Analysis Phase. This decision point is the entry point into the acquisition process for all defense acquisition programs; ...

What statute and regulation is applicable to my program category (i.e., ACAT I – III) and milestone?

Table 2. Milestone and Phase Information Requirements

INFORMATION REQUIREMENT	PROCESS (IC)										SOURCE	APPROVAL AUTHORITY
	IC	CD	RD	MD	PD	OD	SD	DD	DD	DD		
ICD/STATEMENT REQUIREMENT												ICD
ACQUISITION PROGRAM BUDGET (APB)												ICD
ACQUISITION STRATEGY												ICD

What detailed functional policy relates to my program?

Program Management, Systems Engineering, DT&E, OT&E, Sustainment, Human Systems, Affordability, AoAs, Resources and Cost, IT and Clinger-Cohen, Defense Business Systems, Urgent Operational Needs



PROGRAM MANAGEMENT – ENCLOSURE 2

- Acquisition Chain of Command and PEO and PM Assignments
- Enhanced discussion of Program Management Responsibilities
- Program Office Structure and Organizations
- Acquisition Strategies (Statutory Requirements for MDAPs at MS A)
 - Benefit Analysis and Determination
 - Consideration of Technology issues
 - Contract-Type Determination
 - Cooperative Opportunities
 - General Equipment Valuation
 - Industrial base Capabilities Considerations
 - Intellectual Property (IP) Strategy
 - Market Research
 - Small Business Innovation Research (SBIR) / Small Business Technology Transfer (STTR) Program Technologies
 - Termination Liability Estimate

PROGRAM MANAGEMENT – ENCL 2 (CONT)

- Acquisition Strategies (should reflect PM's understanding of)
 - Business Environment
 - Costs
 - Risks and Risk Mitigation Approach
 - Technical Alternatives
 - Small Business Strategy
 - Contract Awards (and Incentive Structure)
 - Test Activities (DT&E, OT&E, LFT&E)
 - Production Lot or Delivery Quantities
 - Operational Deployment objectives
 - Domestic / Internal Market Opportunities
 - Foreign Disclosure / Exportability / Technology Transfers / Security Requirements
 - Life Cycle Support for Affordable Delivery on Realistic Schedule.

The Acquisition Strategy is an approved plan; it is not a contract. Minor changes to the plan reflected in the Acquisition Strategy due to changed circumstances or increased knowledge are to be expected and do not require MDA pre-approval. Major changes, such as contract type or basic program structure, do require MDA approval prior to implementation.

DEVELOPMENT TEST & EVALUATION – ENCLOSURE 4

- Chief Developmental Tester for MDAPs and MAISs
- Lead DT&E (Government) Organization for MDAPs
- TEMP at all Milestones (including MS A)
- Requires the use of Government Test Facilities, unless an exception can be justified
- Emphasis on:
 - Use of scientific and statistical rigor when developing T&E program
 - Program Protection and Cybersecurity
 - Interoperability Testing
- Reliability Growth Curve(s) included in the MS B TEMP (updated in all future TEMPS)
- For accelerated acquisition and urgent programs, levels of developmental testing required will be highly tailored to emphasize schedule over other considerations

OPERATIONAL TEST & EVALUATION – ENCLOSURE 5

- T&E planning moved to left
 - T&E WIPT formed at MDD or program start
 - OTAs comment on OT&E implications of CONOPs after MDD
 - TEMP at all Milestones (no more TES)
 - PM’s understanding of user’s rationale for requirements in MS-A TEMP
 - Start of Design of Experiments for IOT&E in MS-A TEMP
 - Metrics on completeness of design information in MS-A TEMP
- New section on Software Testing
 - Requires plans for test automation starting at MS-A
 - Plan for use of software logs starting at MS-B
 - Demonstration of regression testing at or before IOT&E
 - Demonstration of software maintenance at or before IOT&E
 - Includes risk-based OT, IA, and interoperability

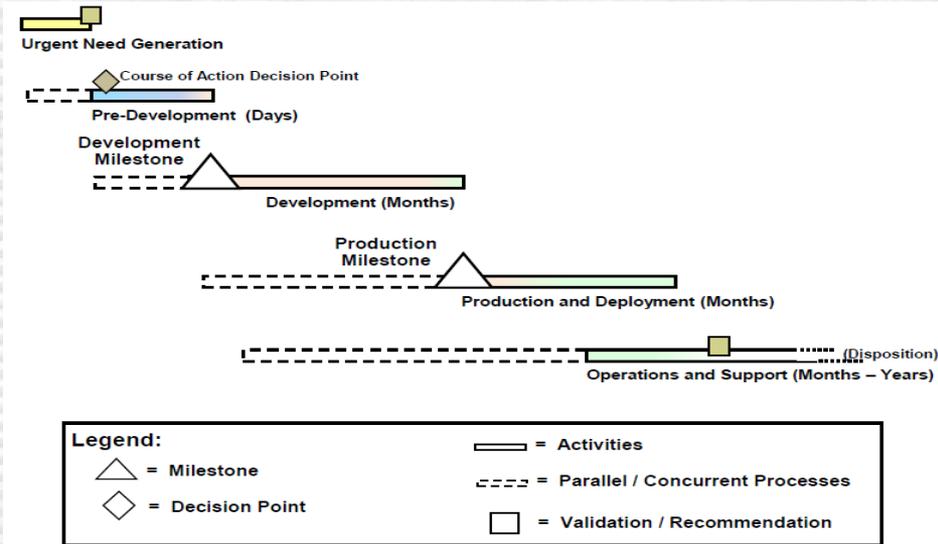
OPERATIONAL TEST & EVALUATION – ENCLOSURE 5

- Clarified use of TEMP at Milestone-A (and general TEMP approval process) for DOT&E oversight systems
 - Designate the lead OTA as coordinator of CONOPS discussion in MS A TEMP [5.d.(1)]
- Added discussion of use of Scientific Test and Analysis Techniques throughout T&E Program Planning [5.e.]
- Revised Modeling & Simulation (M&S) discussion systems [6.d.]
 - Require any M&S that utilize or portray threat characteristics or parameters must have that portrayal accredited by the Defense Intelligence Agency (DIA)
 - For programs under DOT&E oversight, its use for the operational evaluation will be approved by DOT&E
- Clarified Integrated Testing [11.a.(4)]
 - DOT&E must approve OTAs plan for use of integrated testing data before the start of testing; approval will be based on understanding of the realism of the test scenario(s) used and the pedigree (test conditions and methodologies) of the data
- Substantive revision to discussion of OT&E of software
 - Use of Operational Assessments (OA) for Incrementally Deployed Software Intensive Program model [6.a.(2)]; all limited deployments require OT or OA [7.d.(3)]
 - Includes Human-Systems Interface (HIS) assessment and realistic test environment [7.a.]
 - OTA requires DOT&E coordination on the required level of test at all levels of risk [7.d.(2)]
- Added discussion that cybersecurity testing applies to all systems, not just software systems [8.] (while this was original intent, previous organization made this unclear)
 - PM and OTA conduct periodic risk assessments to determine appropriate testing [8.d.]

RAPID FIELDING OF CAPABILITIES

– ENCLOSURE 13

- New Enclosure describing policy, procedure and approval authority for programs that respond to Rapid Acquisition of Urgent Needs
 - Includes Joint Urgent Operational Needs (JUONs), Joint Emergent Operational Needs (JEONs), and DoD Component-Specific UONs
 - General, highly tailorable acquisition business model
 - Applicable to UONs that fall below the cost threshold for ACAT I and IA programs and that can be fielded in less than 2 years
- ... activities detailed in this enclosure are not separate from or in addition to activities performed as part of the acquisition system but are a highly tailored version of those activities and are intended to expedite urgent needs by tailoring the documentation and reviews normally required as part of the deliberate acquisition process



RAPID FIELDING OF CAPABILITIES

– ENCLOSURE 13

- *Urgent Operational Needs include:*

-- Joint Urgent Operational Needs (JUONs) and Joint Emergent Operational Needs (JEONs). *These are either an urgent need identified by a Combatant Commander, the CJCS, or the VCJCS involved in an ongoing contingency operation (i.e. a JUON) or an emergent need identified by a Combatant Commander, CJCS, or VCJCS for an anticipated or pending contingency operation (i.e. a JEON).* For JUONs and JEONs, the validation approval will be by the Joint Staff in accordance with JCIDS detailed in CJCSI 3170.01H. Program execution for JUONs and JEONs will be assigned in accordance with DoDD 5000.71. The MDA for JUONs and JEONs will be determined at the DoD Component level except in very rare cases when the MDA will be designated in an ADM by the DAE.

-- DoD Component-specific UON. These are defined in CJCSI 3170.01H and further discussed in DoDD 5000.71. Approval authorities for DoD Component UONs, including their validation, program execution, and the designation of the MDA, will be at the DoD Component level.

- A Warfighter Senior Integration Group (SIG)-Identified Urgent Issue. *This is a critical warfighter issue, e.g. materiel support to a coalition partner, identified by the Co-Chairs of the Warfighter SIG* in accordance with DoDD 5000.71. The Co-Chairs of the Warfighter SIG will approve a critical warfighter issue statement and provide instructions to DoD Component(s) on program execution and management.

- A Secretary of Defense Rapid Acquisition Authority (RAA) Determination. *This is a Secretary of Defense signed determination that is made in response to a documented deficiency following consultation with the Joint Staff. RAA should be considered when, within certain limitations, a waiver of a law, policy, directive, or regulation will greatly accelerate the delivery of effective capability to the warfighter* in accordance with section 806(c) of P.L. 107-314.

- *More streamlined procedure, to include testing*
- *Clarified Information Requirements*





QUESTIONS?