Overview of the DoD Systems Acquisition Process

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DARPA SBIR Phase I Training Workshop

What is DoD Acquisition?

• The **Defense Acquisition System** is the management process by which the Department of Defense provides effective, affordable, and timely systems to the user. DoDD 5000.01

• An **Acquisition Program** is a directed, funded effort that provides a new, improved, or continuing materiel, weapon, or information system or service capability in response to an approved need. DoDD 5000.01

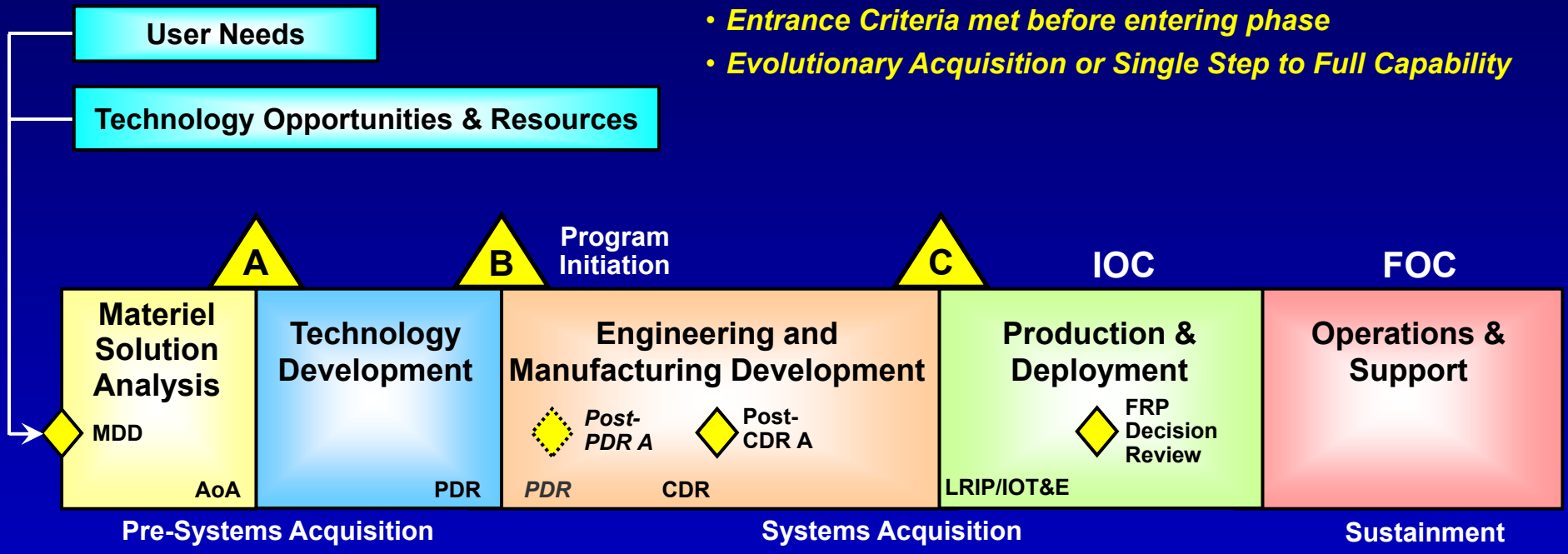
• **Program of Record:**

1) Program as recorded in the Future Years Defense Program (FYDP) or as updated from the last FYDP by approved program documentation (e.g., Acquisition Program Baseline).

2) More commonly used to refer to a program that has successfully achieved formal program initiation, normally Milestone B (Milestone A for ships). DAU Glossary

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*
- *Evolutionary Acquisition or Single Step to Full Capability*



Initial Capabilities Document | *Capability Development Document* | *Capability Production Document*

Relationship to JCIDS

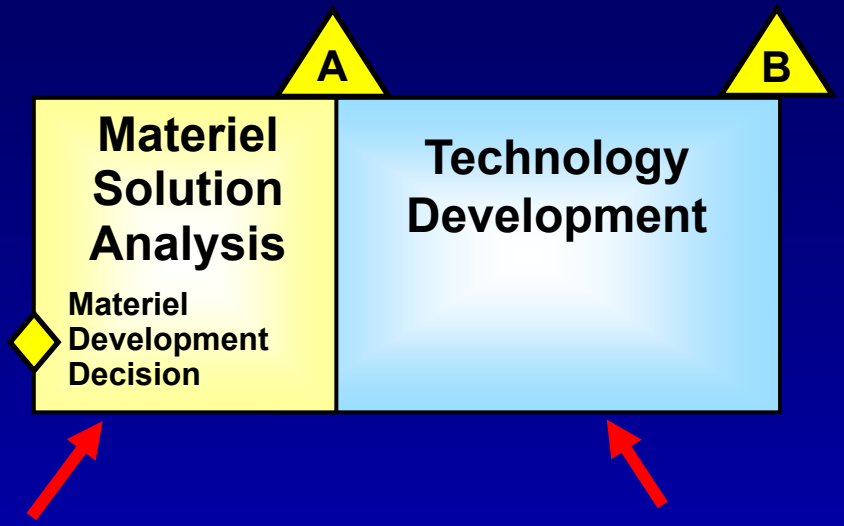
MDD: Materiel Development Decision
Post-PDR A: (Non-MDAPs) Post Preliminary Design Review Assessment
Post-CDR A: Post Critical Design Review Assessment

FRP: Full Rate Production
IOC: Initial Operational Capability
FOC: Full Operational Capability

Materiel Development Decision (MDD)

- **Approval to enter the acquisition process**
- **MDA:**
  - Determines acquisition phase of entry
  - Identifies initial review milestone
  - Designates Lead DoD Component
  - Issues Acquisition Decision Memorandum (ADM)
- **Information Requirements:**
  - Initial Capabilities Document (ICD)
  - AoA Study Guidance approved by Dir, CAPE (AoA Plan due to Dir, CAPE after MDD)

Materiel Solution Analysis & Technology Development Phases



Materiel Solution Analysis

- Enter: Approved ICD and study guidance for conducting AoA.
- Activities: Conduct AoA, develop Technology Development Strategy (TDS) & draft CDD
- Guided by: ICD & AoA Plan
- Exit: MDA selects materiel solution and approves TDS

Technology Development

Enter: MDA approved solution & TDS

Activities: Competitive prototyping; PDR

Guided by: ICD, draft CDD, TDS & SE planning

Exit: Affordable increment of military-useful capability identified; technology demonstrated in relevant environment; manufacturing risks identified; PDR conducted; ready for production within 5 years

Materiel Solution Analysis Phase

Purpose: Assess potential materiel solutions and satisfy entrance criteria for next milestone designated by the MDA

Characterized by:

- Conduct of the AoA
- Assessment of critical technology elements
- Consideration of commercial-off-the-shelf (COTS) and solutions from range of large and small business.
- Fixed price contract(s)* - RDT&E or O&M funded

*Final RFP for TD Phase cannot be released until MDA approves the TDS

Milestone A

MDA approves:

- Materiel solution
- Technology Development Strategy (TDS)
- Exit criteria for next phase
- Milestone A Certification (10 USC 2366a)
- Acquisition Decision Memorandum (ADM)

Statutory & Regulatory Requirements – all programs except where noted

•Acquisition Decision Memorandum (ADM) •Analysis of Alternatives (AoA) •Acquisition Information Assurance Strategy •Clinger-Cohen Act (CCA) Compliance •CIO Confirmation of CCA Compliance (for MDAPs & MAIS, DoD CIO confirms) •Consideration of Technology Issues •Component Cost Estimate (CCE) (MDAP & MAIS) •Component Cost Position (CCP) (ACAT ID) •Economic Analysis (MAIS)	•Exit Criteria •Initial Capabilities Document (ICD) •Item Unique Identification (IUID) Implementation Plan •Life Cycle Signature Support Plan •Market Research •MDA Program Certification (MDAPs) •Program Protection Plan (PPP) •Systems Engineering Plan (SEP) •Technology Development Strategy (TDS) •Test & Evaluation Strategy (TES)

Technology Development Phase

Purpose: Reduce technology risk, determine appropriate set of technologies to be inserted into a full system, demonstrate critical technology on prototypes and complete preliminary design.

Key Activities:

- Demonstrate technology in a relevant environment – competitive prototyping of systems/subsystems
- Risk reduction on components and subsystems
- Planning for life-cycle sustainment
- Technology Readiness Assessments
- System-level PDR for the candidate designs

Contract Type: Cost Reimbursable/Fixed Price – RDT&E funded

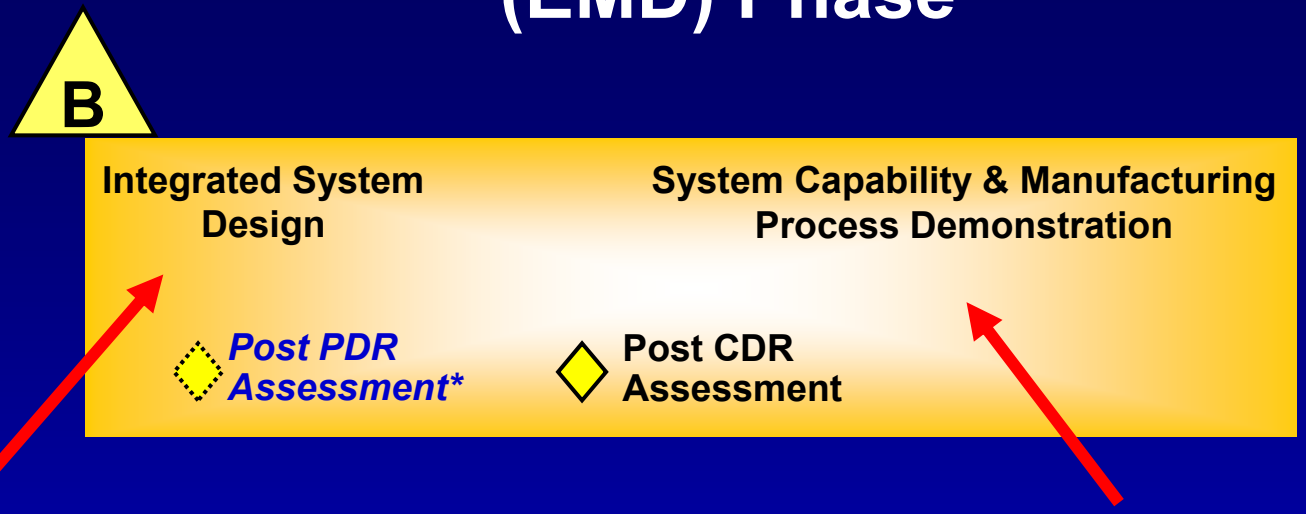
Milestone B

- **Requires an approved Capability Development Document (CDD)***
- **A PM has been assigned**
- **MDA approves:**
  - **Program Initiation**
  - **Entry into Engineering and Manufacturing Development Phase**
  - **Acquisition Strategy (AS)**
  - **Acquisition Program Baseline (APB)**
  - **LRIP Quantities**
  - **Exit criteria for next phase**
  - **Acquisition Decision Memorandum (ADM)**

*If first entering the acquisition process at MS B, an ICD is also required…….. ***AND*** →

Final RFP for EMD contract cannot be released until Acquisition Strategy is approved

Engineering & Manufacturing Development (EMD) Phase



- **Enter**: Mature technology; approved requirements; full funding
- **Activities**: Define system of system functionality & interfaces, complete detailed design, system-level PDR (if needed)/CDR, establish product baseline
- **Guided by**: CDD, SEP, TEMP & Acq Strategy
- **Exit**: Complete system-level CDR and Post CDR Assessment by MDA

*Non-MDAPs: Post-PDR Assessment by MDA if PDR not conducted prior to MS B

- **Enter**: Post-CDR assessment and establishment of initial product baseline
- **Activities**: DT assesses progress against technical parameters, and operational assessments against CDD.
- **Guided by**: CDD, SEP, TEMP & Acq Strategy
- **Exit**: System demonstrated in intended environment using production-representative articles; manufacturing processes demonstrated; meets exit criteria and MS C entrance requirements.

EMD: Integrated System Design

- **Purpose:** Integrate subsystems – reduce systems-level risk
- **Key Activities:**
  - Demonstrate prototype articles
  - Conduct integrated DT, OT and LFT&E
  - Prepare for Critical Design Review (CDR)
  - Prepare RFP for next effort/phase
- **Contract Type:** Fixed price or cost consistent with program risk – RDT&E funded

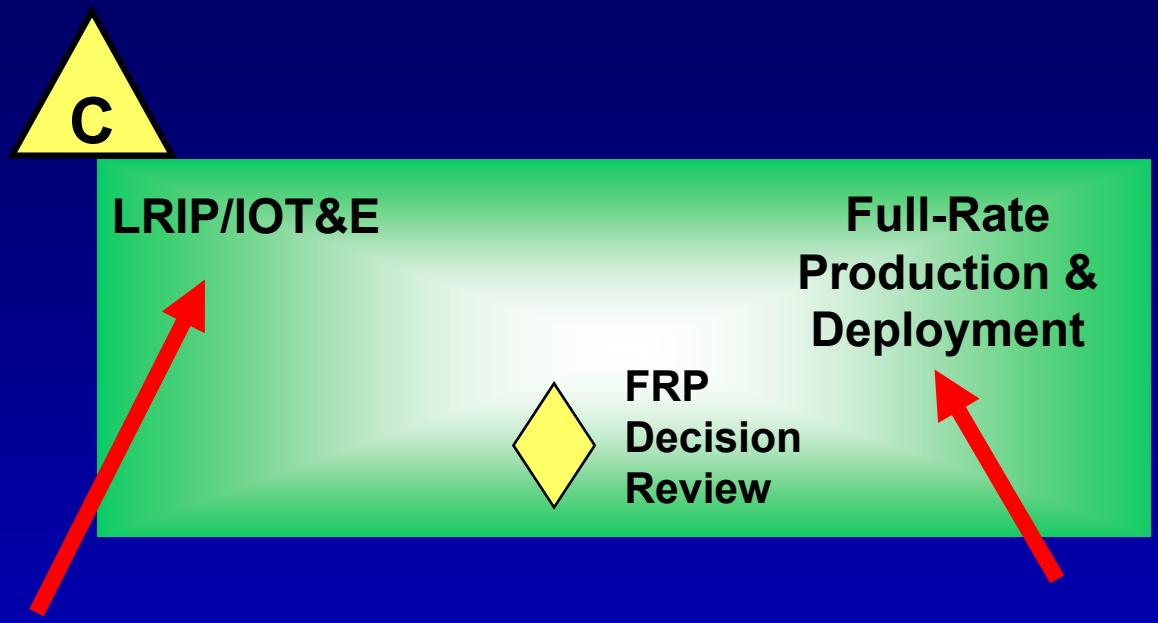
Milestone C

- Commits the Department to Production
- Requires an approved Capability Production Document (CPD)*
- MDA approves:
  - Acquisition Decision Memorandum
  - Updated Acquisition Strategy and Acquisition Program Baseline
  - Entry into LRIP for systems that require a LRIP, into production or procurement for systems that do not require LRIP, or into limited deployment for MAIS programs or software intensive systems with no production components
  - Exit criteria for LRIP if appropriate

Final RFP for LRIP/production contract cannot be released until Acquisition Strategy is approved

*If first entering the acquisition process at MS C, an ICD is also required.

Production & Deployment Phase



- **Enter:** System matured for production
- **Activities:** IOT&E, LFT&E and Interoperability testing of production-representative articles; IOC possible
- **Guided by:** CPD, TEMP
- **Exit:** System operationally effective, suitable and ready for full-rate production

- **Enter:** Beyond LRIP & LFT&E reports (OSD T&E/LFT&E programs) submitted to Congress.
- **Activities:** Full-rate production; fielding and support of fielded systems; IOC/FOC
- **Guided by:** Acq Strategy & LCSP
- **Exit:** Full operational capability; deployment complete.

Low Rate Initial Production (LRIP)

- **Purpose:** Complete manufacturing development, produce minimum quantities for IOT&E, establish initial production base, and to permit orderly ramp-up to full-rate production.
- **Key Activities:**
  - Intensive testing: DT, full-up system level LFT&E, IOT&E and interoperability testing
  - Update support and deployment plans
  - Prepare RFP for full-rate production
  - Prepare for Full-Rate Production Decision Review (FRPDR)
  - Update: all information requirements.
- **Contract Type:** Fixed Price – RDT&E or Procurement funded

Full Rate Production Decision Review (FRPDR)

- **Approves entry into Full Rate Production**
- **MDA Approves:**
  - Acquisition Decision Memorandum (ADM)
  - Full-rate production
  - Updated Acquisition Strategy
  - Updated Acquisition Program Baseline
  - Exit criteria, if appropriate
  - Provisions for evaluation for post-deployment performance

For AIS systems, FRPDR is the Full Deployment Decision Review

Full Rate Production and Deployment

Purpose:

- Establish stable, efficient production and support base
- Achieve initial operational capability (IOC)
- Ensure fielded system continues to provide warfighter with required capabilities

Contract Type: Fixed Price – Procurement funded

Operations & Support Phase

Sustainment

Sustainment starts immediately upon fielding or deployment.

- **Activities:** Maintain readiness and operational capability of deployed system(s). Execute operational support plans. Conduct modifications and upgrades to hardware and software. Measure customer confidence.

Disposal

Demilitarization & Disposal

- **Activities:** Demilitarize and dispose of systems IAW legal and regulatory requirements, particularly environmental considerations and explosives safety.