Executive Certificate in Defense Technology Innovation

Defense Acquisition and Program Management

Defense Acquisition and Program Management

Defense Acquisition and Program Management are critical components of the defense sector, involving the procurement and management of military systems, equipment, and services. These processes are essential for ensuring that the armed forces have access to the necessary resources to fulfill their missions effectively and efficiently.

Key Terms and Vocabulary

1. Acquisition Strategy: The plan developed to guide the acquisition process, outlining the objectives, requirements, and approach for acquiring a particular capability or system. It includes considerations such as budget constraints, risk management, and schedule constraints.

2. Request for Proposal (RFP): A document issued by the government to solicit bids from potential contractors for a specific project or program. The RFP outlines the requirements, evaluation criteria, and terms and conditions for the procurement.

3. Contracting Officer (CO): An individual authorized to enter into and administer contracts on behalf of the government. The CO plays a key role in the acquisition process, ensuring compliance with regulations and overseeing contract performance.

4. Life Cycle Cost (LCC): The total cost of owning and operating a system or capability over its entire life cycle, including acquisition, operation, maintenance, and disposal costs. LCC analysis is essential for making informed decisions about investments in defense programs.

5. Integrated Product Team (IPT): A cross-functional team composed of stakeholders from various disciplines, such as engineering, procurement, and logistics, working together to manage and execute a program. IPTs promote collaboration and communication to achieve program objectives.

6. Technical Baseline: A documented description of the technical characteristics and performance requirements of a system or capability. The technical baseline serves as a reference point for assessing changes and ensuring that the program remains on track.

7. Program Management Office (PMO): An organizational unit responsible for overseeing the execution of a program, including planning, budgeting, scheduling, and performance monitoring. The PMO ensures that the program meets its objectives and delivers value to the stakeholders.

8. Technology Readiness Level (TRL): A scale used to assess the maturity of a technology, ranging from TRL

1 (basic research) to TRL 9 (fully operational). TRL assessments help decision-makers evaluate the risks and challenges associated with integrating new technologies into defense programs.

9. Independent Cost Estimate (ICE): An analysis conducted by an independent party to estimate the cost of a program or project. ICEs provide a benchmark for comparing cost estimates developed by the government or contractors, helping to ensure cost realism and affordability.

10. Earned Value Management (EVM): A project management technique that integrates cost, schedule, and performance data to assess the progress of a program. EVM enables stakeholders to track performance against the baseline plan and identify deviations that require corrective action.

11. Design-Build-Fly (DBF): An acquisition approach that emphasizes rapid prototyping and iterative development to deliver operational capabilities quickly. DBF programs involve designing, building, and testing prototypes in a compressed timeline to accelerate innovation and reduce risk.

12. Systems Engineering: An interdisciplinary approach to designing and managing complex systems, integrating multiple technical disciplines to ensure that the system meets its requirements. Systems engineers focus on optimizing the system's performance, cost, schedule, and risk.

13. Risk Management: The process of identifying, assessing, and mitigating risks that could impact the success of a program. Effective risk management involves proactive planning, monitoring, and control to address potential threats and opportunities throughout the program life cycle.

14. Configuration Management: The discipline of managing and controlling changes to a system's design, documentation, and components throughout its life cycle. Configuration management ensures that the system's configuration remains consistent and traceable to support effective decision-making.

15. Contractor Performance Assessment Reporting System (CPARS): A database used by the government to evaluate and report on contractor performance. CPARS assessments provide feedback on contractors' quality, schedule adherence, cost control, and customer satisfaction to inform future contract awards.

16. Critical Design Review (CDR): A milestone in the acquisition process where the design of a system is evaluated to ensure that it meets the requirements and is ready for production. CDRs assess the system's technical maturity, risks, and readiness to proceed to the next phase.

17. Depot Maintenance: The process of maintaining and repairing military equipment and systems at designated depots or facilities. Depot maintenance activities include overhaul, repair, modification, and storage to sustain the readiness and availability of assets.

18. Foreign Military Sales (FMS): A program through which the U.S. government sells defense equipment, services, and training to foreign governments and international organizations. FMS facilitates international cooperation and interoperability while supporting U.S. national security objectives.

19. Performance-Based Logistics (PBL): An integrated approach to sustainment that focuses on achieving desired performance outcomes at optimal cost. PBL contracts incentivize contractors to meet performance metrics and drive efficiencies in logistics support and maintenance.

20. Acquisition Category (ACAT): A classification system used to categorize defense programs based on their complexity, risk, and resource requirements. ACAT programs are designated as ACAT I (major defense acquisition programs), ACAT II, or ACAT III, with increasing levels of oversight and approval authority.

21. Test and Evaluation (T&E): The process of assessing the performance, suitability, and effectiveness of a system through testing and evaluation activities. T&E activities verify that the system meets its requirements and identify any deficiencies or areas for improvement.

22. Capability Development Document (CDD): A formal document that defines the operational requirements and capabilities needed to fulfill a mission or task. CDDs inform the acquisition process by specifying the system's functions, performance criteria, and key attributes.

23. Program Objective Memorandum (POM): A document that outlines the Defense Department's proposed budget priorities and resource allocations for future programs. POMs are used to justify funding requests and inform decision-making in the defense budgeting process.

24. Information Technology (IT) Acquisition: The process of acquiring and managing IT systems, software, and services to support the mission and operations of defense organizations. IT acquisitions involve unique challenges related to cybersecurity, interoperability, and rapid technological advancements.

25. Capability Maturity Model Integration (CMMI): A framework for improving the performance and maturity of organizations' processes in acquiring, developing, and maintaining products and services. CMMI models provide guidance on best practices and help organizations optimize their processes.

26. Joint Capabilities Integration and Development System (JCIDS): A process used by the Joint Staff to identify, prioritize, and validate joint military capabilities based on operational requirements. JCIDS ensures that defense programs align with strategic objectives and support joint interoperability.

27. Acquisition Program Baseline (APB): A formal document that defines the cost, schedule, and performance parameters of a defense acquisition program. APBs establish the program's baseline plan and serve as a reference point for measuring progress and managing changes.

28. Request for Information (RFI): A solicitation used to gather information from industry or potential suppliers about their capabilities, products, or services. RFIs help the government understand market trends, assess vendor capabilities, and make informed decisions in the acquisition process.

29. Acquisition Milestone Decision Authority (MDA): The individual with the authority to approve milestone decisions for defense acquisition programs. MDAs play a critical role in overseeing program execution, assessing risks, and making key decisions to ensure program success.

30. Capability Development Integration Process (CDIP): A structured approach to integrating requirements, acquisition, and sustainment processes to develop and deliver capabilities to the warfighter. CDIP promotes collaboration and alignment across functional areas to optimize resource utilization and enhance readiness.

31. Independent Verification and Validation (IV&V): A process used to assess and confirm that a system or software meets its requirements and performs as intended. IV&V activities provide an independent assessment of the system's quality, reliability, and compliance with standards.

32. Acquisition Program Manager (APM): The individual responsible for managing and executing a defense acquisition program, overseeing all aspects of the program from initiation to completion. APMs work to achieve program objectives, deliver capabilities, and ensure compliance with regulations and standards.

33. Technology Insertion: The process of integrating new technologies or capabilities into an existing system to enhance performance, functionality, or reliability. Technology insertions can improve system effectiveness, address obsolescence issues, and extend the system's life cycle.

34. Acquisition Oversight: The process of monitoring and evaluating defense acquisition programs to ensure they are meeting cost, schedule, and performance objectives. Acquisition oversight involves reviews, audits, and assessments to identify risks, issues, and opportunities for improvement.

35. Capability-Based Assessment (CBA): An analysis conducted to assess the military capabilities required to achieve strategic objectives and operational missions. CBAs inform capability development decisions by identifying gaps, redundancies, and opportunities for improvement in the defense enterprise.

36. Acquisition Reform: Initiatives and policies aimed at improving the efficiency, effectiveness, and accountability of defense acquisition processes. Acquisition reform efforts seek to streamline procedures, reduce bureaucracy, and promote innovation in the acquisition of military systems and capabilities.

37. Cost Estimating and Assessment Guide (CEAG): A resource provided by the government to assist in developing, documenting, and validating cost estimates for defense programs. CEAG guidelines help ensure consistency, accuracy, and credibility in cost estimating practices.

38. Defense Industrial Base (DIB): The network of companies, organizations, and facilities involved in producing goods and services for the defense sector. The DIB plays a critical role in supporting national security, innovation, and economic development through defense-related activities.

39. Acquisition Category (ACAT) Program Manager: The individual responsible for managing and overseeing a major defense acquisition program designated as an ACAT I, II, or III. ACAT PMs lead multidisciplinary teams to execute programs, deliver capabilities, and achieve program objectives.

40. Small Business Innovation Research (SBIR): A program that provides funding to small businesses for research and development projects that have the potential to meet defense needs. SBIR supports innovation, technology transfer, and small business participation in defense acquisition programs.

41. Capability Portfolio Management (CPM): A strategic approach to managing a portfolio of capabilities to align resources with defense priorities and objectives. CPM involves prioritizing investments, balancing risks and rewards, and optimizing the use of resources to enhance military readiness.

42. Defense Acquisition University (DAU): An educational institution that provides training and certification programs in defense acquisition and program management. DAU offers courses, resources, and tools to help acquisition professionals develop the knowledge and skills needed for success in the field.

43. Integrated Master Schedule (IMS): A comprehensive schedule that integrates all activities, milestones, and dependencies for a defense acquisition program. The IMS provides a roadmap for program execution, monitoring progress, and identifying critical paths to ensure on-time delivery of capabilities.

44. Program Risk Management Plan (RMP): A document that outlines the approach, processes, and tools for identifying, assessing, and mitigating risks in a defense acquisition program. RMPs help program managers proactively manage risks to minimize their impact on cost, schedule, and performance.

45. Foreign Military Financing (FMF): A program that provides grants and loans to foreign governments for the purchase of U.S. defense equipment, services, and training. FMF supports security cooperation, strengthens alliances, and promotes interoperability with partner nations.

46. Capability Development Working Group (CDWG): A forum for stakeholders to collaborate on defining and prioritizing military capabilities to meet operational requirements. CDWGs facilitate communication, consensus-building, and decision-making to inform the acquisition process and resource allocation.

47. Commercial Off-The-Shelf (COTS): Products or technologies that are readily available in the commercial market and can be adapted for defense applications. COTS solutions offer cost savings, reduced development time, and access to state-of-the-art capabilities for defense acquisition programs.

48. Independent Review Team (IRT): A group of subject matter experts assembled to conduct an independent assessment of a defense acquisition program. IRTs provide recommendations, identify risks, and validate program performance to inform decision-making and improve program outcomes.

49. Defense Innovation Unit (DIU): An organization within the Department of Defense that accelerates the adoption of commercial technology for defense applications. DIU works with industry partners to identify and integrate cutting-edge technologies into defense acquisition programs to enhance military capabilities.

50. Performance Measurement Baseline (PMB): A time-phased plan that integrates cost, schedule, and technical performance objectives for a defense acquisition program. PMBs establish the program's performance targets, metrics, and reporting requirements to track progress and assess program performance.

In conclusion, Defense Acquisition and Program Management encompass a broad range of processes, functions, and activities essential for acquiring and managing defense capabilities. Understanding the key

terms and vocabulary associated with defense acquisition is crucial for professionals working in the defense sector to navigate complex acquisition programs, make informed decisions, and deliver value to the warfighter. By mastering these concepts and principles, acquisition professionals can effectively plan, execute, and oversee defense programs to support national security objectives and ensure the readiness of the armed forces.