



ACQUISITION RESEARCH PROGRAM SPONSORED REPORT SERIES

The Case for Case Studies: Leveraging Case-Based Learning for Strategic Innovation in Defense Acquisition

December 2025

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Prepared for the Naval Postgraduate School, Monterey, CA 93943.

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ABSTRACT

Efforts to improve decision-making and critical thinking among Department of Defense (DoD) acquisition professionals have long relied on formal education programs, regulatory handbooks, and rules-based compliance education. While these approaches ensure procedural knowledge and consistency, they often prioritize checklists over informed judgment. In today's complex acquisition environment, marked by rapidly evolving technologies, shifting policy priorities, and highly scrutinized resource decisions, it is imperative that the DoD cultivate the reasoning and judgment skills required of its acquisition professionals. One approach, as argued by former Harvard Business School Dean Nitin Nohria, is the use of case-based instruction. Nohria contends that case-based instruction can develop professional judgment and problem-solving skills more effectively than conventional lecture-based approaches. Despite its success in sectors like business and law, case-based learning remains underutilized in defense acquisition, though its expanded use is now specifically directed under Executive Order 14265, Modernizing Defense Acquisition. In response to this mandate, this research analyzes current shortcomings in DoD acquisition education and presents a framework for the design, development, and implementation of case studies tailored to the defense acquisition environment. Using a real-world program as the foundation, this project also delivers a case study and an accompanying teaching plan.



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LIST OF ACRONYMS AND ABBREVIATIONS

AC	abstract conceptualization
AE	active experimentation
BBR	Bureau of Business Research
BtB	Back-to-Basics
CBE	Competency Based Education
CBL	Competency Based Learning
CCA	Collaborative Combat Air
CCAP	Collaborative Combat Air Program
CCT	Contracting Certification Taskforce
CE	concrete experience
CRS	Congressional Research Service
CSO	Commercial Solutions Opening
DAU	Defense Acquisition University
DIU	Defense Innovation Unit
DoD	Department of Defense
DPCAP	Defense Pricing, Contracting, and Acquisition Policy
EO	Executive Order
FAR	Federal Acquisition Regulation
FY	Fiscal Year
GAO	Government Accountability Office
GS	General Schedule
HBP	Havard Business Publishing
HBS	Havard Business School
IPT	Integrated Project Team
JCIDS	Joint Capabilities Integration Defense System
KO	Contracting
MILSTAR	Military Strategic and Tactical Relay
MOSA	Modular Open Systems Approach
NDAA	National Defense Authorization Act
NGAD	Next-Generation Air Dominance



NPS	Naval Postgraduate School
OTA	Other Transaction Authorities
OSD	Office of the Secretary of Defense
OUSD(R&E)	Office of the Under Secretary of Defense for Research and Engineering
OUSD(A&S)	Office of the Under Secretary of Defense for Acquisition and Sustainment
PEO	Program Executive Office
PII	Personally Identifiable Information
PM	Program Manager
PME	Professional Military Education
PMT	Program Management Training
RO	reflective observation
SAF/PA	Secretary of the Air Force of Public Affairs
SOW	Secretary of War
SPO	System Program Office
TMRR	Technical Maturation and Risk Reduction
TRB	Technical Review Board
USAF ECCT	United States Air Force Enterprise Capability Collaboration Team
WAU	Warfighting Acquisition University



I. INTRODUCTION

The Department of Defense (DoD) acquisition enterprise is undergoing significant reform, driven by Executive Order (EO) 14265, Modernizing Defense Acquisitions and Spurring Innovation in the Defense Industrial Base. The goal of this reform is to enhance procurement outcomes amid growing concerns that America’s longstanding military edge has eroded due to “misplaced priorities and poor management” (Executive Order No. 14265, 2025, Sec. 1). As a result, the order places responsibility on senior acquisition executives to devise plans addressing educational approaches to promote workforce development that fosters improved decision making and critical thinking in traditional and non-traditional contract approaches (Executive Order No. 14265, 2025).

Implementing reforms will be challenging, especially as the current acquisition community lacks the education, tooling, and experience necessary in navigating traditional and alternative contract approaches (Rendon, 2019). New reform efforts emphasize speed and de-emphasize compliance (Losey, 2025), adding subjectivity into already complex contracting processes. Despite subsequent Federal Acquisition Regulation (FAR) revisions, defense acquisition professionals will continue to face complex decisions when choosing between traditional and non-traditional contract approaches—often under intensifying pressure to balance cost, schedule, and performance risks. To meet this challenge, more robust education is needed, particularly instruction that strengthens decision making and critical thinking skills—a point recently underscored by the Secretary of War (Serbu, 2025).

Research consistently characterizes DoD markets as monopsonistic and heavily reliant on traditional contract methods which offer limited leverage for innovation and fail to support the responsiveness needed to tackle acquisition challenges (Sankar, 2024). To solve this problem, the DoD will have to educate its force on how to manage the decision space (marked by trade-off decision and opportunity costs) in terms of judgment, adaptability, and context, areas in which case studies can support.



Case-based studies tailored for the acquisition community could improve decision making and critical thinking by simulating the acquisition environment routinely experienced by acquisition professionals (Yin, 2018). Existing literature illustrates that the using of case studies can improve analytical and abstract thinking, which are highly valued skills in the labor market (Mahdi et al., 2020, p. 297). Outside of academia, defense acquisition has underutilized case studies, instead relying on procedural knowledge and rules-based compliance education. As an example of this practical idea, this thesis will include a mini case study of the Collaborative Combat Air ¹(CCA) program (CCAP).

Case studies are distinguished from other forms of implied knowledge, including best practices and Government Accountability Office (GAO) reviews, because case studies provide contextual information useful for learning to think in “gray spaces.” This differs from best practices which aim to standardized practices, as well as GAO reviews, which aim to audit practices to evaluate compliance and make policy recommendations (U.S. GAO, n.d.). Currently, there is no DoD-wide framework detailing how to develop, collect, and publish tailorable acquisition-based case studies. However, frameworks for employing case studies are actively used in other high stakes fields such as education, business, law, and public administration (Mahdi et al., 2020, pp. 298–299).

The purpose of this qualitative study is to explore how the DoD can follow the guidance in EO 14265 by developing a mini case study based on the CCAP. This case will aim to enhance decision-making and critical thinking skills among its acquisition workforce on topics such as joint decision making and partnering with traditional and non-traditional defense contractors in major weapon system contracting. Currently, DoD acquisition education emphasizes procedural compliance over professional judgment which limits the innovation and flexibility needed to meet the modernization efforts called for in EO 14265. By examining how tailored case studies can be applied, this research will assist senior leaders in their plans for acquisition workforce reform, education, and development.

¹ Collaborative Combat Air is a U.S. defense program that was established to acquire and merge unmanned aerial systems with legacy fighter platforms



A. PURPOSE AND SCOPE OF THIS STUDY

This study directly supports the interest of the Defense Pricing, Contracting, and Acquisition Policy (DPCAP) office. The aim for this research is to explore how case studies can enhance acquisition innovation, support executive guidance, and improve critical thinking as outlined in EO 14265. In addition, this research will examine the CCAP as a model of innovative acquisition practice. All research performed under this study was designed to capture the complexities associated with decision making and critical thinking in often ambiguous situations. Overall, this research aspires to provide meaningful contributions to White House guidance by offering sound recommendations based on qualitative findings.

B. RESEARCH QUESTIONS

Primary Research Question: How can case-based learning (CBL) improve critical thinking and decision-making among DoD acquisition professionals?

Secondary Research Questions:

1. What types of case studies are used in DoD acquisition education programs and how relevant are they to today's acquisition challenges?
2. What are the key characteristics of effective case studies for defense acquisition training and development?
3. How can case studies be developed for defense acquisition?

C. METHODOLOGY

This study relied on document analysis and semi-structured interviews to determine the most effective approach for developing defense acquisition case studies. Expected outcomes and deliverables included the development of a case study template that could be used by the defense acquisition workforce as a training and educational tool. The document analysis component consisted of a comprehensive literature review, while the interview portion explored the experiences and perspectives of acquisition personnel within the CCAP office. These interviews addressed current challenges in procurement and



decision-making efforts and were conducted with tenured acquisition managers at the GS-13 level or above. No physical or experimental tasks were associated with the interviews, nor were any simulations, games, or surveys used.

Sources informing both the template development and interview protocols included scholarly articles from graduate level courses, books, empirical studies, EO's, government agency reports, as well as articles from military publications. All data was accessible through databases like Google Scholar, the Naval Postgraduate School (NPS) library, and the GAO report archives. The student research team analyzed these materials to identify themes related to case studies, defense acquisition, federal workforce training, and the CCAP. Targeted search terms such as "critical thinking" and "case studies" were used to locate literature aligned with the study's focus areas.

To initiate the literature reviews, the student research team concentrated on case study concepts, methodologies, and frameworks for design and development, with additional emphasis on critical thinking and decision making. Given the push on innovative contracting practices under EO 14265, the literature reviews provided valuable insights, enabling the formation of the primary and secondary research questions—which asked whether case studies tailored to defense acquisition could spur better procurement practices.

While the initial phase of the literature review established a foundation for understanding case study theory and history, subsequent analysis emphasized the role of case studies across multiple fields of discipline, including how case studies are currently used with the Department of Defense. Based on this analysis, the research team identified a positive relationship between CBL and the development of critical thinking skills. Although establishing empirical proof of this is beyond the scope of the present study, these findings informed the research teams decision to use the CCAP as a practical model. Conducting a case study based on the CCAP supported the overarching goal for the team's data collection: to analyze successful case structures and determine whether they could improve decision making and critical thinking within defense acquisition.



D. ORGANIZATION OF THESIS

This thesis is organized into six chapters. Chapter I introduces the study by outlining its purpose and scope, research questions, methodology, organization, and target audience. Chapter II provides essential background and contextual information relevant to the study. Chapter III reviews the existing literature on case studies and their use in training and education. Chapter IV presents the case study design framework, describing a three-staged approach to case development. Chapter V delivers findings from research and shows how interviews informed a sample case study. Chapter VI concludes the thesis by summarizing key insights and offering recommendations for future research.

E. TARGET AUDIENCE

The target audience for this study includes:

1. Senior Office of the Secretary of Defense (OSD) officials
2. Defense Acquisition University (DAU) ² practitioners and educators
3. Field training teams tasked under EO 14265
4. Members of the defense acquisition workforce

² As of 2025, the Defense Acquisition University (DAU) has been renamed the Warfighting Acquisition University (WAU). This paper retains the term “DAU” to maintain consistency with existing literature and source materials.



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II. BACKGROUND

The purpose of the background is to explain the growing connection between case studies and their role in defense acquisition. While case studies have intersected with defense education in the past, new defense policies, namely EO 14265, urge further case study development to capture innovative acquisition approaches and strengthen outcomes.

This chapter covers three areas of interest: the historical use of case studies, related federal regulations, and examples of innovative organizations. The highlighted cases, the Defense Innovation Unit (DIU) and CCAP mark the strong opportunities for case study development that can inform future acquisition practice.

A. HISTORICAL USE OF CASE STUDIES IN PROFESSIONAL EDUCATION

The case method is established as a foundational pedagogical approach in professional education, particularly in disciplines requiring complex decision-making under uncertainty (Prystupa & Luethi, 2017). The Harvard Law School pioneered the case method in 1870, when Christopher Columbus Langdell departed from traditional lecture-based instruction and began using actual court cases as the basis for classroom discussions (Kimball, 2004). Langdell argued that law was a science and its principles could be learned best through studying the cases in which doctrine was embodied (Augier & March, 2011). In 1919, the dean of the Harvard Business School (HBS), Wallace Donham, began promoting cases as an instrument for teaching business students (Augier & March, 2011). Beginning with commercial law courses, the HBS adapted Langdell's approach in the 1920s, choosing immersive, experiential learning that simulates the real-world complexities business leaders face (Augier & March, 2011). Instead of relying solely on lectures, students could engage directly with detailed scenarios based on actual business challenges to practice analytical skills and decision-making (Brady, 2017; Hamlin, 2017). This approach not only shows a knowledge of the subject but also decision-making under uncertainty and consideration of consequences (Nohria, 2021).



Beyond business education, the HBS model has shaped how professional education is conceptualized (Starr-Glass, 2017). The HBS case method consist of key components: a narrative case from the point of view of the individual facing a dilemma, limited or ambiguous contextual information, and deliberate suppression of correct answers (Nohria, 2021). Each case is typically 15–20 pages in length (Harvard Business School, n.d.). Case studies often provide the reader with an overview of the main issue; background of the organization, industry, and persons involved, and deliberate incomplete information that requires students to use their judgment under conditions of uncertainty (Nohria, 2021). Additionally, each case ends in key decision to be made. Students are responsible for analyzing the information and deciding the appropriate course of action (Brady, 2017; Hamlin, 2017).

The case method's educational effectiveness goes beyond retaining subject-matter knowledge (Brady, 2017; Prystupa & Luethi, 2017). Case-based learning is anchored in “active and experiential learning, supporting students to develop critical thinking and decision-making skills alongside subject specific content” (Toogood, 2025). Case studies create this active engagement through use of “stories with pedagogical objective” (Herreid et al., 2021, p. 620, as cited in Toogood, 2025, p. 1125) that bring subjects to life and, when used intentionally in the classroom, create potential for active learning (Toogood, 2025, p. 1125). Specifically, decision cases “compel students: to distinguish pertinent from peripheral information, identify problems, dilemmas, decision parameters and alternative courses of action, determine possible solutions, formulate strategies and policy recommendations, and recognize and conform obstacles to their implementation” (Franke, 2011, p. 18). Beyond instruction of a topic, the case study method excels in instilling meta-skills such as preparation, judgment, discernment, collaboration, bias recognition, curiosity, and self-confidence (Nohria, 2021; Prystupa & Luethi, 2017). These competencies are especially relevant for acquisition professionals who often navigate complex, multi-stakeholder environments with incomplete information and competing priorities (Wong et al., 2022).



The case method's pedagogical value extends beyond business education to other professional disciplines (Starostka & Kurzyk, 2017). In legal education, case-based teaching focuses primarily on analysis of precedents set by judicial decisions (Lusoli, 2020). Students examine legal rulings to understand reasoning, argument basis, and interpretation of statute (Lusoli, 2020). This technique emphasizes applying legal knowledge through analytical thinking and synthesis principles from multiple sources (Nohria, 2021).

Unlike in business where cases are focused on strategic ambiguity or in law where the emphasis is legal interpretation and application, medical schooling use of case studies is typically diagnostic and action oriented (McLean, 2016; Thistlethwaite et al., 2012). Medical education employs CBL through analysis of a patient's presentation, diagnostic reasoning, and the development of a treatment plan (ten Cate et al., 2018). Students are exposed to patient cases then tasked to determine diagnosis, treatment, and care strategies (McLean, 2016). Using exercises that mirror real-life medical decision-making instills investigative reasoning and prepares students to handle uncertainty and variability in patient care (Smith et al., 2022). In a prior study of an undergraduate anatomy and physiology course, average exam scores across two semesters rose from 66% to 73% after the instructor incorporated case-based teaching, indicating the case method's effectiveness for improving performance and helping students apply theoretical knowledge in clinical practice (Cliff & Wright, 1996, as cited in Bonney, 2015).

Although the learning objective and mode of thinking differs for each field, case studies have proven to be an effective tool to develop mental habits necessary for professional mastery such as critical thinking, evidence-based reasoning, and insightful judgment (Bonney, 2015). A growing amount of empirical research validates the case method's ability across educational contexts (Bonney, 2015). While the case method is much more effective than lectures in fostering understanding, scholars highlight that no study has produced conclusive evidence of solid learning accomplishments due to case-based teachings (Bonney, 2015).



In contrast to the extensive adoption across law, medical, and business education, the DoD's use of the case method in education and training has been limited and methodologically inconsistent (Gates, 2009). Rather than employing structured teaching cases in the HBS sense, the U.S. Government has more commonly relied on retrospective, post contract award problem assessments, such as GAO audits or investigations (GAO, 2008; GAO, 2015b). There have been localized instances of case-method experimentation throughout the DoD: the U.S. Army Command and General Staff College pilot program to used case studies to integrate learning objectives and reinforce problem solving, the Marine Corps University's case study user's guide for small group discussions, and the CBL embedded in the Uniformed Services University's Leadership Education and Development program (Kem, 2006; Marine Corps University, 2019; Uniformed Services University, n.d.). While professional military education institutions have used case studies to help officers understand complex scenarios and future uncertainties, and the Defense Acquisition University (DAU) has incorporated case study elements and scenario-based learning into its curricula, these applications often lack the structure and the analytical rigor characteristic of the HBS model (DAU, n.d.; Goldman et al., 2024; Werber et al., 2019). The DAU has made efforts to reverse this trend through its case-based video series and interactive simulations (Phillips, 2019). However, most of the cases used are anecdotal and not linkable to ongoing capability goals, lacking the ability to be standardized and scaled DoD-wide (GAO, 2015b; Werber et al., 2019). The gap between the DoD's current approach and proven case method usage represents a significant opportunity for acquisition workforce development.

B. OVERVIEW OF FEDERAL REGULATIONS RELATED TO CASE STUDIES

On April 9, 2025, EO 14265 emphasized the need for CBL as part of a broader framework to reform the DoD's acquisition process (Executive Order No. 14265, 2025, Sec. 1 & 5). Specifically, Section 5(c) of the Executive Order directs the establishment of field training teams to "deliver templates and case studies of successful approaches for implementing innovative acquisition authorities." This represents a significant policy shift in how the acquisition workforce will be developed and empowered to make decisions



(Executive Order No. 14265, 2025, Sec. 2). Section 3 of the order also directs the DoD to prioritize authorities such as Other Transaction Authorities (OTA), Rapid Capabilities Office policies, and pathways under the Adaptive Acquisition Framework to expedite acquisitions. It further calls for eliminating duplicative processes, centralizing decision-making, and restructuring internal regulations in favor of streamlined execution (Executive Order No. 14265, 2025, Secs. 3(b) & 4). Overall, the order sets the conditions ideal for case-based pedagogy. By framing acquisition reform in terms of both structural process change and workforce skill development, a policy foundation is created to institutionalize case studies as a means to meet reform goals.

The Executive Order therefore frames meaningful acquisition reform as dependent not solely on regulatory and structural change, but also on transforming acquisition professionals decision-making practices. By mandating case studies derived from examples of successful execution of innovative procurement methods, the EO acknowledges the role of experiential learning in aligning government initiatives to enhance agility and effectiveness with established defense acquisition processes (Executive Order No. 14265, Sec. 5(c); Nohria, 2021). The emphasis on field training teams also represents a significant departure from traditional classroom-based acquisition education. These teams are tasked with development and dissemination of case studies, and being the hub for feedback between policy development and operational implementation (Executive Order No. 14265, 2025, Sec. 5(c)). This arrangement directly supports iterative learning and knowledge transfer that the case-based method is intended to facilitate.

C. ACQUISITION ORGANIZATIONS PURSUING INNOVATION

The broader defense innovation ecosystem includes various specialized organizations that utilize alternative approaches to traditional acquisition processes (Gallo, 2025). Under Section 834 of the Fiscal Year (FY) 2022 National Defense Authorization Act (NDAA; P.L.117-81), the Under Secretary of Defense for Research and Engineering is leading a pilot program to accelerate the procurement and fielding of innovative technologies (Gallo, 2025). The purpose of the program “is to expeditiously transition



technologies from development into production, and to accelerate the fielding of those technologies to the warfighter” (Gallo, 2025, p. 2). At the military service level, NavalX was established in 2019 to “connect relevant solutions from small businesses, startups, and academia to address the Department of the Navy’s most pressing challenges and operational needs faster” (Gallo, 2025, p. 2). For many of the non-traditional or innovative entities, the focus is connecting private sector companies to the DoD by accelerating the development and adoption of commercial technologies (Gallo, 2025). These organizations collectively demonstrate the recognition that traditional acquisition processes require supplementation through innovative structures and approaches (Gallo, 2025; GAO, 2025b).

The DIU represents a prominent example of organizational innovation within the defense acquisition ecosystem. Started in 2015 by the Secretary of Defense, the DIU focuses mainly on prototyping and fielding dual-use commercial capabilities that solve operational challenges across the U.S. military (Gallo, 2025). Since its founding, the DIU’s authority and responsibilities have been expanded by Congress (Gallo, 2025). For example, the NDAA for FY2024 (P.L. 118–31) directs the DIU to serve as the principal liaison between the DoD and individuals and entities in the national security innovation base such as venture capitalist, commercial technology companies, and start-ups, formalizing its role as a bridge between industry innovation and defense requirements (Gallo, 2025).

The DIU’s evolution demonstrates the potential for continued institutional adaptation within the DoD acquisition system. In a February 2024 report, the DIU director outlined a plan for “DIU 3.0,” identified as the next evolution of the organization (Beck, 2024). After success demonstrating that commercial technology can solve defense innovation problems, the report states that the DIU must now “ensure that the DoD can leverage the best of commercial technology and innovation at speed and scale to deter major conflict or win if forced to fight” (Beck, 2024). This progression from proof-of-concepts to larger scale implementation reflects the kind of strategic decision-making case studies are designed to examine and teach (Nohria, 2021).

The DIU’s operational approach differs fundamentally from traditional acquisition organizations but provides valuable methodological innovation insights for acquisition



professionals (Gallo, 2025). The organization's track record provides concrete evidence of success of alternative acquisition approaches (Vergun, 2020). According to historical DoD reporting, the DIU has awarded more than 160 contracts to commercial companies at significantly accelerated timelines, sometimes completing awards in under 60 days compared to traditional acquisition cycles (Beck, 2024; Vergun, 2020). Additionally, the DIU is leading the DoD's Replicator Initiative, which seeks to rapidly deploy large numbers of autonomous systems across multiple domains over an 18- to 24-month period (Beck, 2024). Coinciding with DIU 3.0, the initiative aims to develop an accelerated process within the DoD for rapidly scaling and fielding operational capabilities to demonstrate how organizations can overcome customary acquisition timelines and procedures (Beck, 2024). The DIU's performance differential and strategic foresight illustrates the potential impact of procedural innovation, making it an ideal subject for a case study.

The DIU's operating procedures provides a valuable reference point for understanding how innovative acquisition organizations can serve as subjects or sources for case study development. The organization's documented processes and decision-making frameworks offer insights into successful adaptation of commercial practices within the defense acquisition context (Gallo, 2025; Vergun, 2020). The DIU's approach to areas such as risk management, stakeholder engagement, and decision-making under uncertainty mirrors the types of challenges CBL is designed to address (Gallo, 2025; Nohria, 2021). Likewise, the DIU's experience in scaling innovations across the DoD exhibits the kind of institutional change case studies can document and facilitate (Gallo, 2025). The organization's evolution from experimental unit to permanent component illustrates how innovative practices can be institutionalized (Gallo, 2025). This kind of real-world innovation path is well suited for CBL applications in DoD acquisition workforce development (Nohria, 2021; Franke, 2011). The methodological approaches developed by the DIU, such as Commercial Solutions Opening process and rapid prototyping frameworks, are the type of innovative acquisition authorities that EO 14265 specifically mentions as subjects for case studies (Executive Order No. 14265, 2025). Altogether, the DIU's implementation of these authorities, its technical processes, and its



organizational culture position it as a real-world exemplar for acquisition-focused case studies that can be constructed to advance the workforce development goals stated in EO 14265.

While the DIU represents a compelling case subject, examining innovation at the organizational level presents methodological challenges for thesis scale research. The breadth of the DIU's portfolio spans multiple technological domains, contract types, and stakeholder networks, and would require data collection beyond the scope of a single research effort. Also, organizational-level case studies are valuable for understanding institutional approaches but may be less applicable for educating and training acquisition professionals on specific programmatic decisions. For these reasons, this research narrows the focus to a program-level case study that demonstrates innovative acquisition approaches within a defined scope. The CCAP is an ideal subject since it employs innovative authorities and commercial strategies similar to the DIU, but within the bounded context of a single acquisition where decision points, stakeholder relationships, and outcomes can be better documented and analyzed.

D. NAVIGATING COMPLEX DECISIONS IN MODERN DEFENSE ACQUISITION

Modern defense acquisition programs are increasingly technically and contractually complex due to the integration of manned and unmanned systems (DiMascio, 2025; GAO, 2025b). Programs like CCAP exemplify the challenges acquisition professionals face when traditional acquisition approaches encounter emerging technology requirements and commercial market dynamics (DiMascio, 2025). These programs require acquisition professionals to navigate multiple interconnected decision points involving cost accounting standards (CAS) interpretation, contract type selection for developmental efforts, and commerciality determinations that impact contractor-to-government relationships. The complexity does not solely exist from technical requirements but from intersecting regulatory compliance, commercial practices, and operational obligations (Werber et al., 2019).



The CCAP is the U.S. Air Force's designation for unmanned aircraft systems that are intended to accompany manned fighter aircraft and execute orders assigned by pilots (DiMascio, 2025). Its mission is to develop unmanned, autonomous aircraft that can communicate in real-time with other airborne platforms and ground assets in highly contested environments (DiMascio, 2025). The program is a formal line of effort within the Next-Generation Air Dominance (NGAD) family of systems, which is a DAF initiative to seamlessly coordinate human operators and autonomous systems (DiMascio, 2025; Secretary of the Air Force Public Affairs [SAF/PA], 2024). This integration challenge is a direct reflection of the transformation from the traditional discrete platform acquisitions in the DAF to managing complex systems-of-systems relationships (DiMascio, 2025; SAF/PA, 2024).

The broader NGAD initiative envisions CCAs as a means to increase overall fighter capacity while shielding human pilots from high-risk missions and achieving significant cost savings compared to traditional fighter jets (DiMascio, 2025; SAF/PA, 2024). The Air Force has an initial planning target of 1,000 CCAs to obtain a ratio of two per manned fighter (DiMascio, 2025; SAF/PA, 2024). CCAs are meant to fly alongside advanced crewed fighters as part of manned-unmanned teams, including planned sixth-generation fighters (Losey, 2025; Tirpak, 2024). As their operational concept evolves, Air Force leaders are also exploring ways CCAs could operate as long-term partners for bomber systems (Tirpak, 2024; Trevithick, 2023). The program's development highlights the Air Force's attempt to address capability gaps while managing budgetary constraints and technological complexity (Wong et al., 2022). This approach fundamentally challenges traditional acquisition models that assume stable requirements, definite development timelines, and clear performance specifications, and instead acquisitions require adaptation to evolving concepts and capabilities (Wong et al., 2022).

The requirement for the CCAP to operate within the DoD systems-of-systems architectures forces the acquisition team to consider decisions that extend past the usual program boundaries, including interface standardization, mission planning systems integration, and coordinated logistics support for manned and unmanned aircraft (United States Air Force Enterprise Capability Collaboration Team [USAF ECCT], 2016). The



Office of the Under Secretary of Defense for Research and Engineering (OUSD[R&E]) implementation guidance of Modular Open Systems Approach (MOSA) principles to enable rapid technology insertion and capability evolution also introduces additional sources of risk and requires intentional management of interfaces, technology upgrades, data rights, and vendor coordination throughout multiple development timelines (GAO, 2025a; OUSD[R&E], 2020; OUSD[R&E], 2025). Accordingly, CCAP acquisition professionals must assess how program-level decisions affect broader capability portfolios, how interface specifications enable or constrain future integration, and how contract structure can ensure component optimization and system-level operational effectiveness (USAF ECCT, 2016).

The CCAP creates new acquisition challenges that encompass human-machine interface design, autonomous system behavior validation, and real-time coordination protocols (DiMascio, 2025; Losey, 2025; SAF/PA, 2025). These conditions point to the need for a program structure aligned with innovative acquisition approaches that can accelerate capability delivery (GAO, 2025b; SAF/PA, 2025). Following an initial competitive phase involving five vendors, the program team exercised option awards to two companies (General Atomics Aeronautical Systems and Anduril Industries) in April 2024 to produce representative test articles (DiMascio, 2025; SAF/PA, 2024). By August 2025, the DAF reached a key development milestone when one of the CCA prototypes achieved first flight within two years of program initiation and 16-months after the preliminary design review (Losey, 2025; SAF/PA, 2025). This rapid timeline required a departure from the traditional acquisition process and utilization of rapid prototyping methodologies that underscore iterative development, including early operational test (GAO, 2023; SAF/PA, 2025).

The CCAP's acquisition approach incorporates several innovative organizational and decision-making structures that distinguish it from traditional defense programs. The program employs a dual-vendor strategy to manage risk while maintaining competition and rapid development, with each vendor proceeding as a separate effort after option exercise (DiMascio, 2025; SAF/PA, 2024). This continuous competition model creates incentives for contractor performance beyond traditional monetary motivations, as vendors



understand that follow-on contracts depend on demonstrated success during the current phase (CCAP Office Official, interview with author October 01, 2025). This approach requires skilled contract management to coordinate parallel efforts while ensuring interoperability and standardization across vendors (GAO, 2025b). Additionally, the program's role in advancing innovation goes beyond its immediate capability objective. It serves as an ideal testbed for acquisition approaches that support more advantageous technology transfer processes (SAF/PA, 2025).

A defining characteristic of the CCAP is its joint decision-making framework between the government and contractors. Unlike traditional acquisition programs where government teams review contractor deliverables at predetermined milestones, the CCAP integrates government personnel within vendor teams, with access to contractor development networks and source-of-truth systems (CCAP Office Official, interview with author, November 17, 2025). This approach enables real-time visibility into design decisions, manufacturing progress, and emerging technical challenges. The program utilizes Technical Review Boards (TRB) as the formal mechanism for joint decision-making on changes that affect cost, schedule, and performance. These boards include lead engineers and program managers from the government and contractor, with joint concurrence required before changes are implemented. When the government and contractor cannot reach alignment through the TRB process, the government retains the ability to direct changes through formal contract mechanisms, but such instances are rare and typically result from differing risk tolerances rather than fundamental disagreements about technical direction. Program personnel report that this structure enables pivoting on technical decisions within weeks rather than the months or years typical of legacy programs (CCAP Office Official, interview with author, November 17, 2025).

The program's organizational structure also employs "fire teams" (dedicated integrated product teams consisting of a program manager, deputy program manager, lead engineer, logistics lead, and test lead assigned to each vendor) and specialists, such as functional engineers, who work with both vendors to maintain knowledge parity and ensure fair competition (CCAP Office Official, interview with author, October 29, 2025). This structure keeps decisions at the lowest appropriate level while maintaining cross-functional



awareness. Program personnel describe a culture where engineering, contracting, program management, finance, and logistics functions are tightly coupled, enabling rapid processing of technical and contractual decisions without the fragmented discussions common in traditional siloed organizations (CCAP Office Official, interview with author, October 01, 2025). This collaborative model, combined with the program's documented success in meeting aggressive milestones, offers acquisition professionals examples of how alternative approaches to contractor relationships can produce results that traditional methods struggle to achieve.

The CCAP's use of "attributes" rather than traditional requirements represents another departure from conventional acquisition practice. This terminology reflects deliberate flexibility for Air Combat Command to pivot as the program learns about the emerging CCA concept and as new technologies become available (CCAP Office Official, interview with author, October 01, 2025). Program personnel indicate this approach enables faster adaptation to discoveries during development while maintaining accountability for operational outcomes.

Yet, as these organizational and decision-making features enable speed and adaptability, they also produce challenges. The CCAP innovative structures reveal multiple categories of acquisition challenges that are summarized in Table 1, making it an appropriate case study subject (DiMascio, 2025). The first category of interest is balancing aggressive timelines with maintaining technical integrity. Another category of interest is managing collaboration boundaries when personnel are embedded in contractor teams working parallel efforts. A third category is joint decision-making across technical, contractual, and organizational domains.



Table 1. Key Decision Challenges in the CCAP

Key Decision Challenges	Description	Impact on Acquisition
Balancing Speed with Technical Integrity	18-month timeline from preliminary design to first flight versus years for legacy programs	Requires continuous judgment on emerging problems; tension between rapid delivery and flexibility when issues arise
Managing Collaboration Boundaries During Competition	Dual-vendor strategy with government personnel embedded in contractor organizations	Questions about appropriate boundaries when helping one vendor could appear as an unfair advantage
Joint Decision-Making Across Boundaries	TRBs and fire team structures integrating engineering, contracting, and program management	Navigating cost increases and schedule impacts while maintaining collaborative culture

Note: This table was created by the authors using information from CCAP official interview with authors.

A program facing these decision challenges is the ideal subject for case study development because there is a concentration of ambiguity, stakeholder complexity, and consequential choices that CBL is designed to address (Nohria, 2021). The scenarios that emerge from the CCAP involve incomplete information, competing objectives, and time-sensitive decisions requiring judgment under uncertainty, mirroring the conditions that business, law, and medical case studies have successfully used to develop analytical and decision-making capabilities in students (McLean, 2016). Unlike retrospective program assessments or compliance reviews, case studies derived from these scenarios present acquisition professionals with the same information available to original decision-makers and require them to work through the analytical process and defend their conclusions in a collaborative setting (Harvard Business School, n.d.). This approach develops the kind of professional judgment EO 14265 seeks to institutionalize through field training teams and CBL initiatives. Given its complexity and innovative acquisition approach, the CCAP is a suitable subject for a case study that can be scaled across the acquisition workforce because it provides realistic scenarios for developing critical thinking and decision-making skills essential for successful acquisition innovation.



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III. LITERATURE REVIEW

This literature review establishes the basis for developing case studies within defense acquisition. Executive Order 14265 directs the establishment of field training teams led by experienced acquisition officials in innovative authorities and commercial solutions that provide on-site training through practical guidance, standardized templates, and case studies of how these tools have been used successfully (Executive Order No. 14265, 2025); yet the defense acquisition community currently lacks structured, academically grounded case studies suitable for professional education. This shortfall is particularly critical for challenges where the acquisition team must make high-stakes decisions under uncertainty and navigate ambiguous contractual frameworks, such as those exemplified by the CCAP. The first half of this literature review provides insight into the history of case studies and the use of case studies as pedagogical tools. The remainder of this chapter examines the conceptual foundations of case study methodology and its relevance to defense acquisition.

A. HISTORICAL OVERVIEW OF CASE STUDIES

Before exploring how case studies can function as pedagogical tools, this review will establish what constitutes a legitimate case study. Beginning with a clear definition is important because every narrative labeled case study does not include educational value necessary for professional training. As discussed in Chapter I, the defense acquisition community needs learning tools that develop judgment under uncertainty and cultivates innovative thinking. The following subsections clarify a true case study by examining how scholars define case studies and the evolution of case-based methods across professional education domains. The historical consideration reveals best practices applicable to defense acquisitions, common implementation challenges, and resource requirements to anticipate when creating case-based training plans.

1. Definition: What constitutes a “true” case study?

Determining a clear definition is essential because case studies serve distinct purposes based on their construction. For educational purposes, cases must present



contextual complexity for learners to deal with the same ambiguities and trade-offs that an actual acquisition professional faces. Kenneth Andrews defined a case as “a carefully written description of an actual situation in business which provokes in the reader the need to decide what is going on, what the situation really is or what the problems are, and what can and should be done” (Andrews, 1951, p. 60). Building on Andrews decision-focused view, leading case study scholars have proposed definitions that emphasize frameworks for ensuring rigor and educational value. A “true” case study examines a specific situation within its actual context, emphasizing depth of experience over breadth. Case study method scholars, such as Robert Yin, Robert Stake, and Sharan Merriam, agree on this core definition but differ in their approaches.

Stake (1995) defines a case as a “bounded system” and emphasizes interpretation rather than testing. He distinguishes three types of case studies: intrinsic which focuses on the case itself, instrumental uses the case to understand a broader issue, and collective to examine multiple cases together (Stake 1995, as cited in Yazan, 2015). His approach values extensive description and the researcher’s role as interpreter. For acquisition contexts, Stake’s instrumental approach is most relevant since this research will use a specific program like CCA to highlight challenges or innovative practices that are applicable to the broader acquisition community.

Merriam (1998) focuses on educational settings, defining a case study as an “intensive, holistic description and analysis of a bounded phenomenon such as a program, an institution, a person, a process, or a social unit” (Merriam, 1998, as cited in Yazan, 2015, p. xiii). She stresses three features: particularistic, meaning it focuses on a specific situation; descriptive, meaning it provides rich detail; and heuristic, meaning it helps readers gain a better understanding (Merriam, 1998, as cited in Yazan, 2015). These characteristics align well with acquisition training needs, where the students would benefit from detailed analysis of specific programs that illuminate patterns relevant to their own work.

Yin (2002, as cited in Yazan, 2015) takes a different view, defining a case study as an empirical inquiry that investigates a contemporary phenomenon (the ‘case’) in depth and within its real-world context, especially when the boundaries between phenomenon



and context may not be clear. His approach emphasizes using multiple sources of evidence and systemic attention to validity and reliability. Yin treats case studies as a research strategy with defined protocols and rigorous methods to support conclusions (Yazan, 2015). This is valuable for defense acquisition cases where lessons learned must be credible to be adopted service wide.

Despite their differences, all three agree that case studies must be bounded in time and place, should use multiple data sources, and aim for deep understanding rather than generalization (Yazan, 2015). For defense acquisition applications, this consensus establishes that cases should present specific programs (clear boundaries), draw from diverse evidence such as contracts and other program documents, and provide sufficient depth for learners to ascertain transferable judgment. Essentially, case study research is not just interviews, it requires systematic inquiry using records, observations, documents, and other evidence (Steenhuis & de Bruijn, 2006). These criteria will guide the case development framework proposed in Chapter IV.

2. Case Method in Business, Law, Medicine, and Public Administration

Understanding how other professional fields have successfully implemented CBL provides valuable insights for defense acquisition. Each profession faced similar challenges of how to bridge academic knowledge and practical judgment, preparing professionals for complex decisions, and how to structure learning to develop critical thinking. By studying the advancement of case methods in business, law, medicine, and public administration, effective pedagogical approaches and implementation requirements can be discovered. The following overview reveals patterns of success, known challenges, and resource investments required to implement CBL successfully.

The case method was first adopted by Christopher Columbus Langdell at Harvard Law School in the 1870s. Instead of lecturing or having students memorize legal discourse, Langdell had students read actual court decisions and use Socratic questioning to derive legal principles themselves (Dhar & Dhar, 2018). This represented a fundamental shift from passive knowledge retention to active analytical reasoning (Dhar & Dhar, 2018). Student were expected to read appellate court decisions and, through structured questioning



by instructors, derive general legal principles themselves rather than memorizing legal doctrine. Students initially resisted the concept, deeming it an abomination, but by the early 1900s the method had become standard in American law schools (Dhar & Dhar, 2018, p. 183). The legal case method emphasis on reasoning from a specific instance to general principles is transferable to acquisition training. However, as discussed later in this section, the legal model also illustrates limitations to avoid.

In terms of business education, HBS adapted Langdell's approach in 1919, but instead of using court decisions, they created detailed descriptions of real business situations requiring analysis and recommendations (Copeland, 1958). Dean Wallace Brett Donham (1922) explained that the goal was not to transmit facts quickly but to develop students "command over new concrete situations" through guided analysis of ambiguous problems (p. 56). Donham was clear about the trade-offs: the case method covered less material than lectures but "the difference between the case method and the lecture-text system is the difference between learning to do a thing and learning about it" (pp. 57, 59). By the mid-1920s HBS cases were widely used at business schools across the country (Copeland, 1958). HBS also distinguished between cases that include the actual decision made and problems which ended the with a question. Though they initially preferred problems, they found that cases worked equally well for teaching (McNair, 1931 as cited in Servant-Miklos, 2019). The adaptation of using business cases that emphasized prospective problem-solving instead of retrospective analysis of completed law decisions is particularly relevant to developing the ability to analyze an ambiguous situation and recommend courses of action acquisition professionals need.

The foundation of case teaching in management rests on a fundamental shift in the learning process (Jain, 2005). Jain (2005) explains that cases move students from passive retention of information to active critical thinking and analysis. This view is supported by empirical and review studies across disciplines that show CBL promotes active engagement, problem solving, and measurable gains in critical thinking compared to lecture-based instruction (Kaddoura, 2011; Farashahi & Tajeddin, 2018; Popil, 2011; Silitubun et al., 2025). Popil (2011) underscores that cases encourage students to think critically by presenting scenarios without simple answers, requiring professional thought



processes and application of theoretical concepts to practical problems. Similarly, Mahdi et al. (2020) found that case study methods significantly enhanced students' critical thinking capabilities, with participants demonstrating improved problem-solving and analytical skills. Kaddoura (2011) further supports these findings through empirical evidence showing nursing students educated using CBL performed significantly better in total critical thinking scores and all critical thinking subscales compared to those in traditional lecture-based programs.

The transition involves three interconnected dimensions applicable to defense acquisition training. First, cases develop analytical skills by requiring students to dissect complex business situations, identify key issues from confusing details, recognize patterns and relationships, and apply frameworks to specific circumstances (Jain, 2005). Second, they cultivate implementation abilities by forcing students to move beyond analysis to propose action, anticipate consequences, consider constraints, and defend choice against alternatives (Jain, 2005). Third, they integrate these dimensions through structured discussion where students must articulate reasoning, respond to challenges, and refine judgment in real time (Jain, 2005). Miri et al. (2007) demonstrated that when teachers persistently practice higher-order thinking strategies through real-world problems, open-ended class discussions, and inquiry-oriented experiments, students show statistically significant improvement in critical thinking skills components including analysis, evaluation, and inference. Jain's framework, reinforced by empirical evidence that well-designed CBL fosters higher-order thinking and critical judgement in complex, real-world decision environments, aligns with the competencies acquisition professionals need to effectively utilize innovative processes described in EO 14265 (Lavi & Marti, 2023).

Case-based learning also has a long history in medical education. In 1900, Walter Cannon introduced a case method at Harvard Medical School that closely resembled the approach used in legal education (Cannon, 1900, as cited in Servant-Miklos, 2019). Cannon explained that students should first study cases on their own, then meet in groups with an instructor to discuss their analysis. The goal was for students to "consider in every detail the differential diagnosis, the principles of prognosis in the case, and the rational treatment" (Cannon, 1900, as cited in Servant-Miklos, 2019, p. 164). This approach fell



out of use at Harvard Medical School in the 1920s, possibly because the rapid advancement in medical knowledge made it seem less suitable (Kimball, 2004, as cited in Servant-Miklos, 2019, p. 165).

Today, CBL in medicine integrates basic and clinical sciences through patient cases to build clinical reasoning, and links theory to practice (Thistlethwaite et al., 2012). It differs from problem-based learning by providing more structure and clearer learning objectives (Thistlethwaite et al., 2012). A major review of 104 studies found that students enjoy CBL and feel it helps them learn, though evidence comparing it to other methods is mixed due to variations in how CBL is implemented (Thistlethwaite et al., 2012). Leading to an important implementation lesson for the DoD, the success of CBL for defense acquisitions depends on how the cases are designed, facilitated and integrated into the curriculum.

The connection between Harvard's case method and McMaster University's problem-based learning has been documented by Servant-Miklos (2019). In the late 1960s, McMaster planners learned about the HBS case method (Servant-Miklos, 2019). Importantly, they borrowed from the business school's problem-oriented approach, not from the medical school's earlier case method (Servant-Miklos, 2019). The key innovation at McMaster was having students discuss problems in groups before individual study, rather than after as it was done at Harvard (Servant-Miklos, 2019). McMaster's adaptation demonstrates that case-based approaches can be adapted to different learning contexts while maintaining their core benefits.

More recent studies show stronger results. Cen et al. (2021) analyzed eight randomized controlled trials and found CBL significantly improved medical students' academic performance. Tsekhmister (2023) reviewed 21 studies with 3,318 students and concluded that CBL improves both academic performance and case analysis ability compared to traditional learning. Noblitt et al. (2010) demonstrated improvements across multiple dimensions when using case study methods versus traditional paper presentations in forensic science education, with students showing significant gains in adapting scientific information and integrating messages. These findings show well-designed cases can



improve student performance when it includes appropriate support and realistic contexts (Noblitt et al., 2010).

Public administration also uses various case formats to capture the action-oriented complexity of administrative work (Schröter & Röber, 2022). Schröter and Röber (2022) identify multiple case types ranging from mini-cases and brief scenarios to longer and comprehensive case narratives. Each serves a distinct pedagogical purpose and require a different teaching approach (Schröter & Röber, 2022). They explain that short vignettes work best with closed, factual questions led by the instructor, as the limited information doesn't support independent deliberation (Schröter & Röber, 2022, p. 266). Medium-sized cases can use closed questions to draw attention to theoretical concepts or open questions when students share professional backgrounds that allow them to supplement missing information from their own experience (Schröter & Röber, 2022, p. 267). Full-length case studies with extensive data work best with open questions that force students to orient themselves, process information, and develop independent problem analyses (Schröter & Röber, 2022, p. 267). For acquisition education, this suggests that case length and structure should be a deliberate decision based on learning objectives, such as shorter cases to build foundational knowledge and longer cases to develop holistic judgment.

However, Schröter and Röber (2022) emphasize that effective case teaching “comes at a cost and requires extra capacity, higher time budgets as well as new qualifications and roles of teachers plus a good fit of student (self)-selection and teaching objectives” (Schröter & Röber, 2022, p. 270). These costs manifest in several ways.

Case teaching places significant time demands on instructors. Unlike lectures where professors can reuse prepared materials, facilitating case discussions requires extensive preparation of questions to guide students through analytical processes, careful attention to the sequence of the discussion, and skill in synthesizing each students' contributions (Schröter & Röber, 2022). This shift in instructional approach makes faculty development. Instructors must learn to function as facilitators and coaches rather than as a knowledge source, developing capabilities in framing productive questions, managing group dynamics, and synthesizing discussions without imposing predetermined conclusions (Schröter & Röber, 2022).



Developing appropriate case materials also demands substantial investment. Unlike law, where centuries of reported court decisions are used as teaching materials, public administration must research and write cases for pedagogical purposes (Schröter & Röber, 2022). Cases must present realistic scenarios while disguising specific details to protect confidentiality. This requires time and institutional resources to develop cases with enough factual detail and contextual information for meaningful analysis (Schröter & Röber, 2022).

Successful implementation further requires careful alignment with program objectives and careful matching of case type to learning goals (Schröter & Röber, 2022). Schröter and Röber classify three categories of learning outcomes corresponding to different case types and teaching approaches: (1) shorter cases with pre-structured questions to convey systematic knowledge, (2) medium-sized cases to cover managing complexity and improving social competence, and (3) comprehensive cases with open questions to develop professional and methodological competencies (pp. 266–269). Misalignment between case type, teaching approach, and intended learning outcomes undermines effectiveness (Schröter & Röber, 2022).

Finally, cultural and institutional fit matters. What works in one organization or culture may not transfer easily to another. Case teaching assumes certain student capabilities and personalities that may not be present in all educational contexts (such as willingness to prepare independently, comfort with ambiguity, ability to engage in intense discussion, and tolerance for multiple versions and interpretations), so, instructors should ensure good fit of students and teaching objectives (Schröter & Röber, 2022). For defense acquisition education, this suggests CBL may work best when students bring real-world experience that helps them navigate the ambiguity inherent in innovative acquisition programs. For instance, since medium cases can use open questions, students would use professional background to fill missing information; and full-length cases would have extensive data where the students would need to orient, process information, and provide an independent analysis (Schröter & Röber, 2022).

Effective CBL requires dedicated infrastructure for case development, instructor training, and continuous case production (Schröter & Röber, 2022). Despite costs and



constraints, Schröter and Röber (2022) conclude that “if meaningfully utilized and well-matched to objectives and student readiness, case studies enhance capacity to prepare executives for complex environments” (p. 270). The investment in case teaching pays off when the objective is developing the professional and methodological competencies associated with holistic problem analysis and judgment, which are best targeted with comprehensive, open-question case designs (Schröter & Röber, 2022). So, the challenge is not whether to use cases, but how to use them strategically—deploying them where they offer the greatest benefit, ensuring instructors have the necessary skills and support, and maintaining realistic expectations about what case teaching can and cannot accomplish (Schröter & Röber, 2022). Defense acquisition education programs would need similar systematic support to implement CBL at scale. This critical resource requirement must be acknowledged when planning implementation of E.O. 14265 and will inform the recommendations proposed in Chapter VI.

3. Methodological Standards

While the preceding sections examined the various approaches to the case method, it is equally important to understand case studies as a research methodology. This distinction matters because rigorous, credible case studies require systematic research methods. The methodological standards established by scholars ensure that acquisition cases are more than anecdotes but produce valid insights. The following sections outline methodological frameworks for case study research developed by Yin, Stake, and Eisenhardt, each offering distinct approaches suited for different research purposes, while grounded theory and progressive case study approaches provides additional flexibility for emergent discovery.

Yin (2018) treats case studies using replication logic analogous to experiments. He highlights five components: clear research questions, propositions to guide the study, definition of what counts as “the ‘case’”, logic linking data to propositions, and criteria for interpreting findings” (Yin, 2002, as cited in Yazan, 2015, p. 26). His replication logic treats each case like an experiment, multiple cases either produce similar results, a literal replication, or a theoretical replication where different results for predictable reasons (Yin,



1994, as cited in Steenhuis & de Bruijn, 2006, p. 46). This approach requires detailed protocols and careful attention to validity and reliability (Hollweck, 2016; Yin, 2002, as cited in Yazan, 2015).

Stake emphasizes interpretation and understanding rather than testing theories. He advocates for “progressive focusing,” where research questions may change as understanding develops (Stake, 1995, as cited in Yazan, 2015). For Stake, using multiple data sources confirms findings and reveals different perspectives (Yazan, 2015). This approach fits researchers who want deep understanding of a particular case rather than testing of existing theories (Stake, 1995, as cited in Yazan, 2015). For acquisition case studies, Stake’s approach suits in-depth exploration of unique programs where the goal is understanding the specific context rather than producing generalizable theory.

Eisenhardt (1989) developed a framework for building theories from cases. Her process has eight activities: defining the research focus, selecting cases, designing data collection that mixes qualitative and quantitative data, overlapping data collection and analysis, analyzing each case individually, looking for patterns across cases, developing hypotheses, and comparing findings to existing literature (Eisenhardt, 1989, Table 1). Unlike Yin, she recommends beginning as “as close as possible to the ideal of no theory under consideration” to avoid limiting what you might discover (Eisenhardt, 1989, p. 536). This research method is most suitable when the intent is to produce comparative studies such as examining multiple innovative defense programs to identify patterns of best practices.

Grounded theory, developed by Glaser and Strauss (1967), begins research without predetermined ideas and lets concepts emerge from data (Glaser & Strauss, 1967, as cited in Steenhuis & de Bruijn, 2006). Case selection occurs during research based on what’s been learned so far, continuing until no new insights emerge (Glaser & Strauss, 1967, as cited in Steenhuis & de Bruijn, 2006). Steenhuis and de Bruijn (2006) propose a “progressive case study” that combines grounded theory’s openness with some use of replication logic features from Yin and Eisenhardt (Steenhuis & de Bruijn, 2006). They illustrate this with an extensive example of four technology transfer cases studied over nine months, involving hundreds of interviews and thousands of pages of documentation



(Steenhuis & de Bruijn, 2006). Through illustration of the selection process, each case both developed new concepts and tested earlier findings.

The choice among these approaches depends on the researcher's knowledge goals and intended outcome. Yin's approach suits researchers testing or extending theories (Yazan, 2015). Stake's approach fits those seeking deep understanding of cases (Stake, 1995, as cited in Yazan, 2015). Eisenhardt's approach works for building new theories from systematic comparison (Eisenhardt, 1989). For creating defense acquisition cases, the choice of approach depends on the purpose. Yin's approach is best suited for developing case studies with clear lessons. Stake's approach is best for in-depth exploration of unique programs, and Eisenhardt's method works for comparative research identifying patterns across organizations.

4. HBS's Case Method Approach

HBS established a structure for case teaching that remains influential and offers an example for the acquisition context (Copeland, 1958). The HBS case method provides a relevant benchmark for defense acquisition education because it targets the development of decision-making under uncertainty (Donham, 1922; Nohria, 2021). Students prepare individually, discuss in small groups, then participate in instructor-led class discussion where they must defend their recommendations (Nohria, 2021). The method shifts emphasis from absorbing facts to developing a command of the subject through analysis of an uncertain situation (Donham, 1922). This method could be adapted for defense acquisition training where students study a program case, discuss with peers to test their analysis, then engage in a facilitated discussion to improve judgment and learn from diverse viewpoints.

Donham (1922) identified both benefits and requirements of the HBS case method. Benefits included developing student initiative, developing analytical and synthetical skills, and building judgment through discussion of realistic problems (Donham, 1922; Lusoli, 2020). Requirements included skilled instructors who could facilitate rather than lecture, careful curriculum design, and significant investment in developing case materials and training faculty (Donham, 1922). By the 1920s, the approach had spread beyond



business schools to government and policy teachings, such as Donham and the HBS Bureau of Business Research (BBR) working with Harvard's Department of Government in 1924 to gather cases for HBS built institutions (BBR and Harvard Business Review) accelerating diffusion (Copeland, 1958; Lusoli, 2020). The same requirements apply to defense acquisitions. The DoD must invest in instructor or field training team development, case production infrastructure, and a training plan that implements CBL effectively.

The infrastructure supporting HBS's case method demonstrates the support and mechanisms required. The BBR developed standardized protocols for case production: (1) faculty identified pedagogical needs, and (2) the Bureau identified appropriate companies, conducted field research, and formatted materials for classroom use (Lusoli, 2020). This system enabled rapid scaling and by 1925, the BBR had published more than 5,000 cases and HBS controlled about 80% of the case market (Lusoli, 2020). The formation of the Harvard Business Review in 1922 further supported case dissemination and faculty development around case-based teaching (Copeland, 1958). For defense acquisitions, similar institutional support is necessary, including dedicated case research and development teams, standardized operating procedures, policy oversight, and processes for sharing cases across the acquisition training programs.

The business case method also evolved beyond HBS's original model. While early cases typically described business situations and ended with questions requiring recommendations, the method diversified to include various formats. There are cases that present actual decision made by the company, allowing students to evaluate that decision, while others end without a resolution and require students to develop their own solution (Servant-Miklos, 2019, summarizing McNair, 1931). Some cases focus on narrow technical decisions, others address broad strategic dilemmas. This variety enables instructors to match case complexity and focus learning objectives with student readiness (Jain, 2005; Lusoli, 2020). Defense acquisition cases should similarly vary in scope and format to serve different educational purposes.

A recent study also argues that the HBS case method extends beyond teaching business concepts to developing an individual's ability to learn new things quickly and adapt across contexts (Nohria, 2021). For defense acquisition professionals navigating



evolving technologies and changing policies, adaptive capabilities will be as beneficial as mastery of a specific regulation or process. Relying on alumni feedback, Nohria (2021) identified seven meta-skills developed through CBL, each easily transferable to acquisition professional daily duties (pp. 4–8):

1. Preparation: Instructors using cold call technique forces students to prioritize thorough preparation such as identifying key issues and developing initial stance.
2. Discernment: Cases force students to pull essential information, developing the ability to focus on what matters.
3. Bias Recognition: Through repeated case discussions, students become aware of their biases and learn to actively correct or seek diverse perspectives.
4. Judgment: Cases require students to make and defend decisions under uncertainty, increasing the capacity to make judgments with incomplete information then communicate those decisions confidently.
5. Collaboration: Discussing cases in a group setting develops the ability to participate in decision-making process and integrate multiple perspectives.
6. Curiosity: Exposure to different programs and diverse approaches through cases stimulates curiosity about different pathways and possibilities.
7. Self-Confidence: Students taking on leadership roles and defending positions amongst peers build confidence in their ability to handle challenges.

Harvard Business School alumni highlight these meta-skills as the case method's primary contribution to their professional development (Nohria, 2021). Therefore, development of case content should incorporate improving adaptive capabilities as well as improving acquisition knowledge. This finding will inform the framework developed in Chapter V.



B. CASE STUDIES AS PEDAGOGICAL TOOLS

After establishing what constitutes a rigorous case study and how case-based methods evolved across professional fields, this review now examines their efficacy. Before investing in CBL, it is crucial to analyze evidence that the approach will deliver the critical thinking, judgment, and decision-making capabilities for acquisition professionals. The following sections synthesize research findings on CBL effectiveness across professional fields, benefits for critical thinking, and usefulness for teaching decision-making under uncertainty.

1. Comparative Review of Adoption and Effectiveness Across Domains

Analyzing how different professional fields have adopted CBL reveals patterns of success and other context that inform acquisition education planning. Each field provides data about certain capabilities CBL develops, implementation constraints, and the conditions in which each approach works best.

Applying the Case Method in Business: As Jain (2005) observes, “the case method is universal and ubiquitous in management education today” (p. 77), yet it is typically complemented by other pedagogical methods rather than as an exclusive approach (pp. 78–80). The method’s prominence reflects its alignment with core management education goals such as developing leadership capabilities, fostering collaborative problem-solving, building communication skills, and cultivating strategic thinking (Jain, 2005; Nohria, 2021). These goals apply to defense acquisition professional education, mirroring the DoD Contracting Competency model and the GAO’s observation that DoD leaders expect acquisition personnel to use critical thinking and sound judgment in decisions (Office of the Under Secretary of Defense for Acquisition and Sustainment [OUSD(A&S)], 2024; GAO, 2015a).

The pedagogy deliberately creates what Jain (2005) considers a participative learning environment, where instructors are brokers and students lead discussions. Unlike lectures where the instructor solely controls content and delivery, case discussions distribute initiative more broadly. Students must independently analyze the case and develop preliminary position. The instructor’s role is to pose questions, draw out



perspectives, and highlight tension or contradictions (Jain, 2005). This structure makes students active rather than passive participants in the instruction and requires them to analyze and think systematically on business subjects (Donham, 1922). However, current management education recognizes that while cases provide benefits, they cannot serve all pedagogical purposes effectively. As Jain (2005) states, the case method is “typically complemented by other tools” (Jain, 2005). Foundational concepts and analytical techniques are often best taught through lectures or readings before being applied through cases. Quantitative methods require problem sets. Specialized technical skills benefit from demonstrations or simulations. The challenge is determining optimal methods rather than selecting a single pedagogy.

Harvard Business School also recognized from the outset that this pedagogical approach involved significant trade-offs. Donham (1922) acknowledged that the discussion-based case method is slower than lectures, but he framed this as a deliberate trade-off to develop control of the subject (Donham, 1922, p. 57). The case method cannot relay content as quickly as lectures. A well-crafted lecture can efficiently convey definitions, historical development, and empirical data that would otherwise require hours of case discussion to uncover. Donham acknowledged this directly: cases result in “slower” coverage and “less ground covered” compared to traditional methods (Donham, 1922, p. 62). Yet, Donham (1922) argued that this limitation reflected a difference in educational purpose rather than pedagogical defectiveness, stating the difference between the case method and lecture-text system is practical preparation for executive work rather than simply conveying theoretical knowledge about business (p. 58). With this understanding, management education aims to develop skills and abilities for action not to transmit information, “command over new concrete situations through students’ ability to reason back from these situations to the principles involved” and “apply to new facts the lessons of similar events in the past” (Donham, 1922, p. 54). For acquisition education intended to develop action-oriented capabilities, this trade-off may be acceptable.

The business education experience thus demonstrates strengths of case teaching like judgment under uncertainty and integrative thinking, and its inherent limitations regarding extent of coverage and efficiency of knowledge spread (Donham, 1922; Nohria,



2021). The method's "universal and ubiquitous" importance in management education is due to its strengths aligning with management education core goals, even if achieving those goals requires supplementation through other teaching approaches (Jain, 2005).

Applying Case Methodology In Law: Despite early resistance, Langdell's case method transformed legal education by institutionalizing student-led analysis and Socratic questioning (Dhar & Dhar, 2018). However, critics identify two limitations relevant to acquisition education. Rakoff and Minow (2007) argue that centering legal education on appellate decisions is overly restrictive since cases arrive already framed, facts already established, and outcomes already determined. This approach sharpens analytical skills but neglects the investigative, fact-finding, and persuasion skills most attorneys need in practice. Students miss the opportunities to learn how facts are constructed and framed before they reach an appellate court. These limitations are not solely pedagogical but reflect what Rakoff and Minow (2007) identify as a fundamental gap: Langdell's method "sharpens analytical skills but fails to develop legal imagination," understood as the capacity to frame problems in multiple ways and devise alternative arguments and solutions for analysis (p. 602).

Recognizing these shortcomings, many law schools now supplement case method with debates, simulations, clinical experiences, and skills training (Dhar & Dhar, 2018; Rakoff & Minow, 2007). These additions aim to expose students to the complicated reality of legal practice, including negotiation and strategy involved in framing legal issues, that the appellate case method masks. This suggests cases for acquisition education should present situations for analysis that students can frame the problem and generate a solution.

Applying the Case Method In Medicine: Thistlethwaite et al.'s (2012) review of 104 studies found the students consistently report high satisfaction with CBL and feel it enhances knowledge. However, evidence comparing CBL to traditional teaching is mixed and inconclusive due to variations in how studies were conducted and what they measured (Thistlethwaite et al., 2012). More recent studies show stronger results. Cen et al. (2021) analyzed eight randomized controlled trials and found CBL significantly improved medical students' academic performance (Cen et al., 2021). Farashahi and Tajeddin (2018) studied 194 students comparing lectures, cases and simulations. Students rated simulations best for



developing interpersonal skills and self-awareness, with cases second and lectures third (Farashahi & Tajeddin, 2018). For problem-solving, simulations and cases were deemed as equally effective and both better than lectures (Farashahi & Tajeddin, 2018). This evidence suggests, when properly implemented, case-based approaches can improve knowledge retention, relational skills, self-awareness, and problem-solving.

Applying the Case Method in Public Administration: Public administration pedagogy employs a range of case types. Schröter and Röber (2022) developed a typology matching case types with teaching goals under two dimensions: the volume and content of case material and pre-determined analysis with specific guiding questions versus self-structured analysis with open-ended tasks. This method is valued for preparing executives for the intricate and ambiguous environments they will encounter. The authors also note that case teaching suits some courses and objectives better than others (Schröter & Röber, 2022, pp. 266–268). When foundational facts or theoretical knowledge must be conveyed efficiently, traditional lectures may be more appropriate. “All pedagogies have appropriate places in a curriculum, and a complete curriculum should include a wide variety of pedagogies to appeal to the learning styles of all students” (McDade, 1995). The case method specifically excels at teaching thinking processes, dealing with complex and uncertain situations, and developing the capacity to integrate multiple perspectives (McDade, 1995; Schröter & Röber, 2022). For defense acquisitions, this indicates cases should complement, not replace, other teaching approaches, and be utilized in instances they offer the greatest benefit.

Across fields, CBL consistently increases student engagement and perceived relevance, strengthen applied reasoning and integration of theory with practice, and work best when design, facilitation, and assessment align with learning goals (Thistlethwaite et al., 2012). However, evidence of clear superiority over lectures remains mixed and depends on context (Farashahi & Tajeddin, 2018). When employing CBL for defense acquisitions, it should be implemented strategically for specific objectives rather than a blanket replacement for existing training.



2. The Link Between Case Studies and Critical Thinking

The case method's main goal is developing thinking processes. Students practice first-person analysis by identifying issues, stakeholders, constraints, alternatives, and consequences in a setting that challenges assumptions, requires applying theory to practice, and demands defending judgments (Jain, 2005). As Jain (2005) and McDade (1995) argue, an emphasis on analysis in context has led to case teaching developing higher-order thinking, such as analysis, synthesis, and evaluation. In management education specifically, case work develops all components of professional critical thinking: strategic thinking, communication, teamwork, and judgment (Jain, 2005). McDade (1995) further details multiple ways case teaching advances critical thinking, including its capacity to ground learning in realistic contexts, connect theoretical frameworks with practical application, and push students to question their assumptions and consider alternative approaches (p. 42). All essential capabilities for DoD acquisition professionals executing innovative processes.

Empirical evidence supports these theoretical claims. Noblitt et al. (2010) found that forensic science students using the case study method demonstrated significantly better performance in critical thinking compared to traditional paper presentations (Noblitt et al., 2010). Students improved in effectively researching information, organizing information, and integrating multiple sources of data into a cohesive argument (Noblitt et al., 2010). The author attributed these improvements to the case work requiring analytical decision-making, formulation of original viewpoint, and creation of sound narratives, rather than simply regurgitating information (Noblitt et al., 2010). This indicates CBL critical thinking value stems from requiring students to complete the full reasoning process.

3. Efficacy Teaching Decision-Making Under Uncertainty

Modern acquisition environments are characterized by volatility, uncertainty, complexity, and ambiguity (Franke, 2011, p. 2). Cases, especially when combined with simulations, help develop the non-linear reasoning, pattern recognition, and adaptive decision-making needed in such environments (Franke, 2011, pp. 21, 23). Franke (2011) argues that cases provide the “pedagogical foundation for decision-making under



uncertainty” by repeatedly exposing students to ambiguous situations requiring actions (p. 3). Through cases, students develop pattern recognition by learning to see structural similarities across different situations, and practice making decisions under time pressure with incomplete information (Franke, 2011, p. 2-3, 13, 21–23). This builds mental models and decision-making shortcuts, or heuristics, that can be used in real-world settings (Franke, 2011, p. 9).

Donham’s (1922) early HBS philosophy inherently centers on uncertainty-oriented capabilities to develop “command” over new situations through reasoning from principles, rather than simply memorizing facts (p. 54). Business professionals face new problems every day, so their education must emphasize transferable thinking processes rather than memorization (Donham, 1922, p. 57). This rationale applies to acquisition professionals who encounter unique challenges in their program. Case-based learning supports decision-making through several mechanisms. First, cases provide a controlled environment for proposing and debating alternatives without real consequences (Jain, 2005). Second, exposure to diverse cases builds a repertoire of mental models (Franke, 2011). Third, discussion reveals multiple ways of framing problems, showing that framing choices shape available solutions (McDade, 1995). Fourth, defending recommendations develops awareness of one’s own reasoning and assumptions (Jain, 2005).

The case method bridges research and teaching. As research, it provides systematic, contextual inquiry with clear standards for rigor (Merriam, 1998; Yazan, 2015). As teaching, it uses structured discussion of real situations to develop analysis, synthesis, and judgment (Donham, 1922; Jain, 2005). The historical maturation of the case method shows key variations. Langdell’s legal method emphasized deriving principles from court decisions through Socratic dialogue (Dhar & Dhar, 2018). HBS adapted this to open-ended business problems emphasizing decision-making under uncertainty, influenced by John Dewey’s problem-method (Servant-Miklos, 2019); and McMaster’s problem-based learning further innovated by adding discussion before individual study (Servant-Miklos, 2019). Each iteration occurred based on the specific needs of its professional context.

Evidence from health professions education consistently shows case-based approaches increase student engagement, strengthen integration of theory with practice,



and support learning in a small-group setting (Thistlethwaite et al., 2012). However, evidence of overall superiority to traditional teaching on standardized measures remains mixed, likely reflecting both the methodological challenges and potential misalignment between case method goals (reasoning, integration, judgment) and typical assessments (knowledge recall; Thistlethwaite et al., 2012; Tsekhmister, 2023). The key challenge for defense acquisitions is specifying the conditions under which cases effectively achieve particular learning objectives for a target audience, and developing assessments that sufficiently capture the complex learning cases are intended to promote. Cases focusing exclusively on program manager perspective may miss important insights from contracting officers, industry partners, or end users.

For teaching decision-making under uncertainty, cases offer a valuable setting for practicing sense-making and adaptive judgment (Franke, 2011; Nohria, 2021). By presenting realistic ambiguity, requiring action despite incomplete information, and facilitating reflection on decisions and consequences, well-designed cases develop the pattern recognition, flexible reasoning, and cognitive self-awareness that characterize expert decision-making (Franke, 2011; McDade 1995). These capabilities are what acquisition professionals need when implementing innovative processes or managing innovative programs like CCA. The CBL framework developed in Chapter IV and the recommendations proposed in Chapter VI will build on these findings to create DoD-specific approaches that leverage the case method's proven strengths while avoiding demonstrated difficulties.

C. THEORETICAL FOUNDATIONS OF CASE-BASED LEARNING

This portion of the literature review examines some theoretical foundations and practical applications of CBL in professional education. The student research team has organized this review into two parts. The first part analyzes frameworks that support CBL, while the second looks at the relevance of these frameworks within the defense acquisition community. Overall, the literature is connected to the central research question: How can CBL improve critical thinking and decision-making among DoD acquisition professionals?



Understanding CBL requires examining the theories that explain how professionals learn through experience and application. First, student researchers drew on Kolb's Experiential Learning Theory to examine how knowledge is created. Next, students explored competency-based education, which provided principles and definitions that align with CBL. Finally, the student research team addressed the impacts of skill deficiency, revealing why traditional lecture-based approaches may be insufficient for developing critical thinking and decision-making skills needed in complex acquisition environments.

1. Experiential Learning Theory: Kolb's Model

In 1984, David A. Kolb published *Experiential Learning: Experience as the Source of Learning and Development*, which expanded upon various learning theories and processes. But rather than differentiating his learning theory from others, Kolb opted to integrate the concepts of Lewin, Dewey, and Piaget (Kolb, 1984). Drawing from their teachings, Kolb defined learning as “the process whereby knowledge is created through the transformation of experience,” emphasizing the interaction between experience, perception, cognition, and behavior (Kolb, 1984, p. 21). While Kolb acknowledged differences between Lewin's, Dewey's, and Piaget's models, he also emphasized feedback and reflection within the learning process. Each helps manage imbalances between observation and action, which Lewin and his followers believed attributed to individual and organizational ineffectiveness (Kolb, 1984, p. 22).

Kolb's research remains highly relevant in many adult and professional learning environments. Kolb argues that if learners are to be effective, they need four kinds of abilities: concrete experience abilities (CE), reflective observation abilities (RO), abstract conceptualization abilities (AC), and active experimentation abilities (AE) (Kolb, 1984, p. 30). Each ability that Kolb points to corresponds to four learning stages: experience, reflections, conceptualizing, and testing (Kolb, p. 21, 1984). When combined, the four stages illustrate that learning is more of a process as opposed to an outcome (Kolb, 1984).

Similarly to Kolb's four kinds of abilities, William Ellet (2007) offers four types of situations that commonly arise in cases: problems, decisions, evaluations, and rules (Ellet, p. 20, 2007). While these categories appear distinct, they each relate to the four stages



alluded to by Kolb. Problems are observable and can be prompted through CE. Evaluations are tied to RO and AC, and permit reasoning. Decisions and rules are reflected through AE and AC and require the application of testing.

Building on Kolb's emphasis on applied learning, competency-based education (CBE) provides a framework for understanding how learning outcomes can be measured and validated in professional contexts. CBE is relevant to defense acquisitions because it focuses on proven mastery rather than content recall, a distinction that is important to the real-world decision-making challenges acquisition professionals face.

2. Competency-Based Education (CBE): Principles and Definitions

Although no universal definition of Competency-based education (CBE) exists, academic literature frames it as an approach that bridges the gap between knowledge and demonstrated mastery of skill (Johnstone & Soares, 2014). It achieves this by focusing on measurable outcomes and core competencies as opposed to the recall of content (Johnstone et al., 2014). The benefit of CBE is that it is well suited for real-world applications and professional development, aligning it with other pedagogical frameworks like CBL.

In a 2014 article titled *Principles for Developing Competency Based Education Programs*, authors Sally Johnstone and Louis Soares view CBE as an innovative approach to higher education. Their research suggests that CBE could enhance the transition between postsecondary education to the workplace by following the four principles below:

- The degree reflects robust and valid competencies.
- Students are able to learn at a variable pace and are supported in their learning.
- Effective learning resources are available any time and are reusable.
- Assessments are secure and reliable (Johnstone & Soares, 2014, pp. 15–18)

By following these principles, the authors assert CBE can be institutionalized (Johnstone & Soares, 2014). This was proven when researchers partnered with 11 colleges across the country. Their study found that 10 campuses successfully established CBE programs and “developed successive approximations of each principle” (Johnston & Soares, 2014). CBE offers a valuable framework for understanding how case studies tailored for the defense acquisition workforce can support the speed and flexibility the DoD



is seeking. Both emphasize applied knowledge over content recall, making them suitable for acquisition professionals in need of skill development.

While CBE establishes what acquisition professionals should be able to do, understanding how current training falls short requires exploring the cognitive and behavioral aspects of skill development. Research on information behavior and cognitive gaps reveal that competence is not solely about having knowledge but about applying it effectively in complex, ambiguous situations, the exact type of environment CBL is designed to simulate.

3. Impacts in Skill Deficiency

Competence is defined as the ability to apply knowledge, skills, and abilities in support of a work function (Arifin, 2021). The DoD Contracting Competency Model (2024) expands this by framing competency as a pattern of behavior that a person exhibits to perform work successfully. In both viewpoints, effort and behavior, not technical knowledge alone, are vital in successful work environments.

While Arifin focused on behavioral traits, Kolb (1984) emphasized the integration of both behavioral and cognitive abilities, asserting that experience is key to learning and skill development (p. 21). Still, other scholars suggest that a baseline level of skill is often insufficient to overcome shortfalls in logic (Gross, 2005).

Arguably, deficiencies in skill could be explained by lack of competence. The DoD Contract Competency Model (2024) addresses the need for employees to acquire competencies across multiple skill sets. It urges that personnel “must have effective, analytical, problem-solving, and communication skills.” However, such competencies are not easily taught. Gross (2005) notes that “those with low-level skills tend to overestimate their abilities . . . and are unlikely to seek training,” making skill gaps harder to detect and mitigate (Gross, 2005, p. 155).

The acquisition domain comprises multiple functional areas, each requiring specific skills in navigating procurement processes. Wielinga, Akkerman, and Schreiber (1998) note that job specific domains often influence knowledge structures, shaping how theory



connects to principles and application (p. 321). Arifin (2021) reinforces this view, emphasizing the importance of understanding contextual factors as part of skill development. If successful acquisition outcomes rely on skill efficiency, it will be important to determine how competence can be gained. Gross (2005) highlights competence can be drawn from asking calibrated questions, which is often a feature embedded within CBL.

D. RELEVANCE TO THE DEFENSE ACQUISITION COMMUNITY

Following the establishment of the theoretical foundation for CBL, is the examination of its specific relevance to the defense acquisition community. The section reviews the current landscape of case study use in the DoD and military education, identifies challenges unique to developing acquisition-specific case studies, clarifies the distinction between case studies as research tools and CBL as pedagogy, critiques conventional training approaches, and demonstrates on CBL aligns with priorities outlined in EO 14265.

1. Existing Use of Case Studies in DoD and Military Education

Case studies have increasingly become integral to the DoD and military educational landscape. General Alfred M. Gray, founder of the Marine Corps University, long championed their use, emphasizing “The focus of effort (of PME) should be teaching through doing, through case studies, historical and present-day, real and hypothetical, presented in war games, map exercises, sand table exercises, free-play, force-on-force ‘three day wars’ and the like” (Augier & Barrett, 2021, p. 43). His emphasis on experiential learning shaped Marine Corps education reforms and positioned case studies as a vehicle for developing critical skills. More recently, a 2021 RAND report noted that Congress, through Section 576 of the FY21 NDAA, called for the expanded use of case studies across Professional Military Education (PME; Goldman et al., 2024). RAND highlighted their utility in not only PME, but also in operational and strategic settings. The report further emphasized the value of case studies in fostering critical thinking, a skill identified as essential for professional development and strategic decision-making (Goldman et al., 2024). Beyond their role in PME, case studies are used in defense acquisition. Whether



developed by RAND or other governmental organizations, these case studies are purposed to help analyze programs and practices, offering lessons on the roles of key players and the effectiveness of acquisition strategies. Many of these cases focus on high-visibility or innovative efforts, making them relevant for educating acquisition professionals.

While sources like RAND and the GAO develop acquisition case studies, none of their literature specifically addresses how they are being used, promoted, or integrated into training frameworks. A 2022 RAND report titled “Improving Defense Acquisition” mentions the term “case studies” 18 times throughout the report. However, most references to “case studies” in the report refer to a specific defense program or was a study about a certain acquisition method which lacked detailed context. Overall, the 2022 RAND (Wong et al., 2022) report highlights the need for defense acquisition reform but lacks insight regarding challenges in creating acquisition-specific case studies and integrating them into workforce training.

The existence of case studies in PME and acquisition research has not proven to translate to effective workforce training. As is evident in the next section, significant challenges exist in creating acquisition-specific case studies that can serve as effective pedagogical tools rather than descriptive recollections.

2. Challenges in Creating Case Studies

In his book: *Case Study Research: Design and Methods*, Yin (1984) outlines several challenges on creating case studies that the DoD should consider. He warns there is potential for bias to influence the direction of a case, including its findings and conclusions (p. 21). In practice, this means investigators may knowingly or unknowingly misrepresent elements of the case leading to errors in interpretation. Another challenge he finds is the belief that case studies often result in “long, unreadable documents” (p. 21), which can make them somewhat unpopular. Finally, he notes the difficulty in an investigator’s ability to create meaningful cases.

While Yin (1984) highlights methodological challenges, Herried et al. (2016) provides insight into what makes a quality case. Herried et al.’s (2016) study outlines the challenge and importance of ensuring realism and relativity in case design and instruction.



After surveying 1,800 teachers, Herried et al.'s (2016) concluded that critical thinking was an essential characteristic of a good case, followed by storytelling, and relevance to the students. They also identified a reoccurring challenge of overcoming a lack of enthusiasm for longer cases (Herried et al., 2016). Perhaps the study's most important finding was that cases do not have to be real but must feel real to be effective instructional tools.

In the same way, Yin (1984) outlines challenges that regard not only how they are designed, but how they are managed and perceived. Taken together, these insights show the importance of designing meaningful cases that stimulate learning. They also raise deeper questions regarding the relationship between case studies (a methodological tool) and CBL (a pedagogical framework). Understanding this difference is important for defense acquisition leaders who must determine how to best leverage case studies beyond just documentation of past programs.

3. Distinctions Between Case Studies and Case-Based Learning

The purpose of this section is to examine the differences, if any, between case studies and CBL, and why it matters for defense acquisition. Throughout portions of this literature review, the terms 'case study' and 'CBL' have been used interchangeably. Likewise, it is important to identify their relationship and provide proper definitions. Additionally, we will review sample acquisition case studies from the GAO and the NPS, then classify them according to the research.

In the current acquisition context, many case studies are not designed as instructional tools which support critical thinking and decision making but instead serve as narrative accounts. While these narratives provide valuable context, they often lack the structured decision points and facilitation elements necessary for effective CBL. Yin (1984) defines case studies as empirical inquiries used to analyze and understand phenomenon in their real-life context (Yin, 1984, p. 23). The central tendency of these types of studies is to highlight decision making processes within their context (Schramm, 1971).

While Yin (1984) and Schramm (1971) frame case studies as a research method, other scholars extend the form into pedagogy. This is where the term CBL (CBL) is derived



from. While there is no consensus on a formal definition of CBL, scholars see it as a form of inquiry that enables structured and guided learning (McLean, 2016).

To date, most acquisition case studies are aligned within traditional research. The key distinction is that research case studies follow a systematic method, whereas expository (non-research) case studies do not (Yin, 2018, p. 22). Nonetheless, this distinction does not limit the potential of CBL to highlight the dynamics of decision-making environments (Schramm, 1971).

Case studies and CBL can be applied in many contexts beyond traditional research roles (Yin, 2018, p. 21). As we noted earlier, case studies have been used in fields such as law and medicine to simulate practice and enable critical thinking in order permit learners to defend their assessments in guided environments (Garvin, 2000). Furthermore, these cases provide not only content, but also instructional design elements (decision points, discussion frameworks, and facilitation guidance) that transform narratives into tools for experiential learning.

To show how current acquisition case studies compare to scholarly definitions, student researchers reviewed five acquisition case studies – three from the GAO and two NPS theses (see the table below). The GAO cases aligned with Yin’s research framework, while the NPS cases reflected a more analytical approach, holding some value for critical thinking and decision-making exercises. Across both sources, the studies primarily presented a sequence of key events and decisions made by contracting officers and program managers. While these cases provided useful descriptive accounts, they lacked integration of decision points and frameworks, leaving missed opportunities for learner engagement. Of course, this could be by design, but the intent of our review was to survey the types of case studies available. According to Garvin (2000), “learning is usually associated with thinking rather than doing” (p. 26). In this sense, GAO and NPS case studies were more effective at documenting acquisition processes than at cultivating critical thinking and decision-making skills for quick action.



The table below reviews five defense acquisition-related case studies. Its purpose is to provide insight into the teaching suitability of each case study, identifying its purpose, source, and format type, and explaining why it is or is not an appropriate type for training.

Table 2. Comparing Various DoD Related Case Studies

Case Title	Source	Purpose	Format	Has teaching and Decision Points	Teaching Suitability (L/M/H)
DoD Acquisition: Case Study of the Army Tactical Missile System	GAO	Discusses strategy formation and the decision-making roles of the KO and PM	Narrative of Events & Issues	No	Medium – Provides acquisition context but would need modification to embed teachable criteria. Case study provides more insight into dynamics than decisions.
DoD Acquisition: Case Study of the MILSTAR Satellite Communications System	GAO	Examines new weapon systems in their initial stages of development	Narrative of Events & Issues	No	Medium – Offers some practical insight but reads more like a narrative. It mostly examines/narrates how teaming arrangements can impact the acquisition environment
DoD Acquisition: Case Study of the Army Light Helicopter Program	GAO	Documents roles of the KO and PM and their influence on execution	Narrative of Events & Issues	No	Medium – Provides context but lacks decision points to guide learners. This case study considers how constraints impact milestones and timelines.
Case Study of the development of the Target Acquisition Designation/Pilot Night Vision System	NPS	Analyzes the acquisition strategy. Focuses critical technologies and evaluates early-stage development.	In-depth Narrative	No	Medium – This study provides deep analytical insight. It looks at the roles of key stakeholders throughout the process, but still would require modification to enhance training
Naval Acquisition in the United States and Russia	NPS	Presents an analysis between Russia and the United States regarding Naval Acquisitions	Analytical	No	Medium – This study highlights governance structures that impact acquisition processes. It provides considerable insight but would require tailoring to focus on decision making processes

Note: This table was created by the authors using multiple sources: GAO (1986a); GAO (1986b); GAO (1986c); Oelrich (2002); Marchese & Chan (2023).

In the sixth edition of *Case Study Research and Applications: Design and Methods*, Yin (2018) distinguishes between several types of case studies: those created for research,



those structured for training, and those developed for non-research purposes (p. 21). Research and training cases studies, such as those shown in the table, are designed for specific audiences (for example: The GAO cases were geared to congressional authorities). By contrast, expository case studies are geared toward mass markets and do not follow a formal method.

In our literature review of the case studies in the table, we found that they were often presented descriptively rather than interactively. This distinction is critical because, as Kolb (1984) emphasizes, knowledge is created through the transformation of experience; without opportunities to engage with problems and choices, acquisition professionals may have difficulty gaining any additional insight or value from using case studies as tool to assist with problems they currently face (p. 38).

Yin's view of case studies and CBL is very relevant for defense acquisition education. Regarding CBL, he notes that "the purpose of these kinds of case studies has been to present information about practical situations" (Yin, 2018). Similarly, he asserts that "a case study need not reflect a complete or accurate rendition of actual events; rather, its purpose is to establish a framework for discussion and debate among students" (Yin, 1984, p. 14). This raises concerns about the usefulness of past studies for the acquisition workforce, particularly since lower-level contracting officers and program managers were not the intended audience.

To align with EO 14265, the case studies we reviewed would likely require revisions to facilitate the necessary critical thinking and decision-making paramount in innovative contracting environments. While the EO explicitly references case studies, it does not formally address CBL. Given the overlap between the two, senior officials should recognize the value of CBL and how aspects of it can address the current pitfalls in acquisition training and educational approaches.

The EO calls for case studies to share innovative acquisition approaches, but to be effective as a training tool, these cases must be designed to force learners to analyze why decisions were made, consider alternatives, and identify which lessons apply to their



acquisition challenge. The pedagogical quality of true case studies is exactly what current acquisition training lacks.

The theoretical foundations and definitions above provide a structure for evaluating current acquisition training methods; particularly how they measure up to the advantages in developing critical thinking and decision-making skills CBL offers. Research in healthcare education, a field that demands sound professional judgment, provides parallels for understanding the limitations of lecture-based approaches in acquisition training.

4. Critique of Conventional Learning Approaches

Academic literature suggests that conventional learning methods often default towards lecture-based models. While these lecture-based models hold certain pedagogical value (French & Kennedy, 2016, p. 1), they can be limited in practice, particularly in fields that demand strong critical thinking, reasoning, and decision-making skills. This has been a longstanding issue within military education and training, raising questions about why alternative learning approaches have lagged in adoption. For many years, General Gray emphasized the value of case studies, highlighting their effectiveness in developing critical thinking and decision-making skills necessary for military organizations to prosper (Augier & Barrett, 2021).

In a 2025 published article in the Journal of Education and Health Promotion titled the “Effectiveness of CBL in comparison to alternate learning methods on learning competencies and student satisfaction among health care professional students: A systematic review,” researchers found that healthcare students exposed to CBL scored significantly higher in critical thinking than those who received lecture-based instruction (Varma et al., 2025). As a result, the authors urged broader adoption of case studies among healthcare professionals, asserting current healthcare instructional models were inadequate in fostering critical thinking and reasoning skills (Varma et al., 2025). Varma et al.’s (2025) research aligns with ongoing reforms in defense acquisition. The policy shift under EO 14265 signals a need for alternatives to training approaches, which typically emphasize procedural compliance over professional judgment.



Conventional lecture-based learning has been used for centuries, emerging first in medieval Europe universities (French & Kennedy, 2016, p. 2). Even now, it remains the dominant method used in both higher education and in the military institutions (French et al., 2016, p. 2). Critics argue that lecture-based learning focuses more on content delivery and less on discussion or active student involvement (Varma et al., 2025), underscoring its limitations for enhancing collaboration and developing critical thinking skills. But as French et al. points out, it could be improved upon and integrated into other teaching methods (French & Kennedy, 2016, p. 4).

Current training models in defense procurement tend to use conventional learning methods (reliance on lectures, computer-based training, and DAU modules), that emphasize procedural applications and compliance over critical thinking and decision-making frameworks. While this approach is effective in many FAR-based applications, which constitute most of the acquisition training, it is often less effective for non-FAR based requirements that historically received less emphasis before recent reforms. Even within FAR-based contexts, some procurements are so complex and ambiguous that they require further adaptive reasoning beyond procedural knowledge.

The findings in the healthcare education study illustrate two additional challenges that the DoD will need to address. First, the DoD will need to examine the current limitations in traditional approaches to defense education and form a plan to institutionalize case studies. Second, it must examine how case studies can be applied and tailored to assist with workforce reform, equipping professionals with the tools and resources they need to be in strategic alignment with EO 14265.

The evidence from healthcare education and the parallels to acquisition training highlights a fundamental issue: EO 14265 calls for speed, flexibility, and innovation in acquisition, but these outcomes depend on a workforce that can think critically and make sound decisions under uncertainty. Understanding how CBL can support the EO's strategic objectives requires examining the order's specific guidance and the role case studies play in their implementation.



5. Strategic Alignment with EO 14265

EO 14265 emphasizes reform, innovation, and workforce development. A brief excerpt of the order states the following:

It is the policy of the United States Government to accelerate defense procurement and revitalize the defense industrial base to restore peace through strength. To achieve this, the United States will rapidly reform our antiquated defense acquisition processes with an emphasis on speed, flexibility, and execution. We will also modernize the duties and composition of the defense acquisition workforce, as well as incentivize and reward risk-taking and innovation from these personnel (Executive Order No. 14265, 2025, Sec. 2).

This language emphasizes the DoD's need to accelerate procurement objectives, signaling acquisition reform is essential to maintaining the United States' military dominance. The policy extends beyond acquisition processes, also implying that educational reforms, particularly those involving applied learning methods such as case studies, can support broader initiatives.

A 2021 RAND report titled *Intellectual Firepower: A review of Professional Military Education* (Goldman et al., 2024), commissioned by Congress under Section 576 of the FY21 NDAA, provides a similar parallel. However, the central theme was to develop a comprehensive overview of the PME system (Goldman et al., 2024, p. V). Here, RAND researchers focused their study on the types of education available to field grade officers from grades O-4 to O-6, aiming to identify opportunities for improving PME through a systematic review (Goldman et al., 2024, p. V). Their objectives were to describe, review, and analyze the DoD education system, an effort that aligns with EO 14265's mandate for senior acquisition officials to assess and reform defense acquisition.

For decades, Congress has relied on the RAND Corporation, a non-profit research organization, to conduct studies that inform government programs and policies. This effort proved no different. To conduct the study, RAND employed a mixed-method approach, combining qualitative analysis with comparative case studies. Data sources contributing to the study's findings included thirteen military educational institutions, multiple services staff offices, and five civilian graduate programs. Although RAND's research



methodology was extensive, it was not without limitations. First, the study was directed towards officer PME, excluding enlisted and DoD civilian programs. In addition, unclear performance expectations for graduates and limited feedback from graduates in follow-on assignments made it difficult for RAND to validate the effectiveness of PME. Despite these and other factors, RAND successfully highlighted several opportunities to enhance PME, and their approach was adequate for the level of congressional inquiry.

In the context of applied learning, RAND's findings highlight important opportunities for enhancing PME. For this study, however, their relevance lies less in PME itself and more in what they reveal about defense acquisition, specifically, the role case studies can play in advancing reform under EO 14265. In their systematic review, RAND reviewed and assessed the expansion and use of case studies in curricula for PME (Goldman et al., 2024, p. 7). Researchers recorded that case studies were effective in developing critical thinking, situational awareness, decision-making, and understanding complex processes (Goldman et al., 2024, p. 33). However, they found case studies to be generally less effective for teaching hard skills or technical content such as accounting or mathematics (Goldman et al., 2024, p. 34).

The report also notes that strategic and operational institutions increasingly use case studies to navigate complex environments, whereas technical institutions rely on other methods because case studies are less effective for teaching narrowly defined technical skills (Goldman et al., 2024, p. 33). This relates to defense acquisition in few ways. The defense acquisition workforce operates primarily within strategic and operational contexts. And acquisition personnel, like strategists, have a far more ambiguous job than other government career fields. As a result, acquisition personnel must develop strong critical thinking and decision-making skills to be effective. Studies like the RAND report indicate that the DoD recognizes the value of case studies. Yet, they also reveal that their use is concentrated in specific settings, like in academia or at higher strategic levels.

EO 14265 calls for expanding the use of case studies to share successful approaches for implementing innovative acquisition strategies (Executive Order No. 14265, 2025). Its aim is to leverage teams, templates, and case studies to support acquisition reform goals (Executive Order No. 14265, 2025). Historically, the use of case studies in any DoD



context has varied depending on the operational environment and strategic context (Goldman et al., 2024). However, the literature suggests that broader adoption is still needed. To comply with the EO, the DoD must encourage its workforce to adopt new approaches to learning. Practice exercises, such as case studies, reinforce readiness, making them especially valuable in strategic environments where professionals operate under constraints and evolving demands.

E. SUMMARY

This literature review converges on a clear argument: CBL is a sound approach for developing the judgment, reasoning, and decision-making skills that the defense acquisition workforce requires. But its effectiveness depends on rigorous design protocols, skillful facilitation, and alignment with defined competences. Foundational theories explain how guided discussions about realistic, bounded situations build transferable skills, while cross-field evidence shows consistent improvements in engagement and applied reasoning. Although there were mixed findings on CBL superiority over lectures when measured by traditional assessments. Within the DoD, existing case studies often are descriptive research reports rather than pedagogical instruments with decision points, guided discussions, and assessment of more than knowledge retention. The remainder of this thesis maps an implementation pathway, based on the research, to realize EO 14265's intent.



IV. CASE STUDY DESIGN FRAMEWORK

A. ADAPTION OF ESTABLISHED CASE FRAMEWORKS

This thesis proposes a three-phased approach to case study development for defense acquisitions. This section will first describe how the CBL framework from the HBS was adapted to create a structured approach suitable for the regulatory and mission contexts of defense acquisitions. This adaptation addresses a gap identified in Chapter III: most defense acquisition case studies function as descriptive reports rather than pedagogical instruments. The next section explains how the adapted framework was refined through theoretical pedagogy perspectives and professional competency development principles, particularly where they supplement learning decision-making under uncertainty. The third section examines how to sanitize case materials with careful attention to operational security, privacy protection, and the dynamic nature of an on-going acquisition program. This approach provided a rigorous foundation for developing instructional case studies that effectively support critical thinking and decision-making skill development among acquisition professionals.

1. Application of the HBS Case Method

The first phase of case development involved adapting an established CBL method. The Harvard case method typically emphasizes forming three integrated components: a detailed case narrative, comprehensive teaching notes, and explicit learning objectives. This research adapted these components for the defense acquisition environment (Hammond, 2002).

The first component is a case narrative that presents a real-world acquisition challenge within its full organizational and policy context (Ellet, 2018). Effective case narratives serve as realistic, decision-focused representations of managerial situations, placing readers in the role of a decision-maker facing a consequential problem, incomplete information, and real-world constraints (Hammond, 2002; Harvard Business School, n.d.; Winston, 1995). For defense acquisitions, this means incorporating relevant regulatory



frameworks, stakeholder dynamics, and decision-making constraints inherent to the federal procurement environment.

The second component involves teaching notes that guide the instructor through pedagogical objectives, discussion questions, and key decision points within the case. These notes serve as tools for structuring discussion, anticipating student responses, and planning how to navigate critical moments in the learning experience (Harvard Business School, n.d.; Winston, 1995).

The third component establishes learning objectives aligned with acquisition workforce competencies and the strategic goals outlined in EO 14265. Case teaching guidance stresses aligning cases and teaching plans with desired capabilities (Harvard Business School, n.d.; Nohria, 2021). Executive Order 14265 specifically prioritizes accelerating delivery of warfighting capabilities and reforming acquisition processes to emphasize speed, flexibility, and effective implementation of non-traditional approaches (Executive Order No. 14265, 2025).

The case narrative structure follows established conventions from business case writing, presenting a protagonist (decision-maker) facing a specific challenge requiring analysis and action. The case was designed to provide sufficient contextual information while leaving key analytical work to the student, thereby promoting active learning and critical thinking.

2. Adaptions Required for Defense Acquisition

This section describes the adaptation of the HBS case method for defense acquisitions contexts. Several adaptations to the Harvard case method were necessary to address the characteristics unique to government procurement. First, defense acquisition cases must integrate statutory and regulatory requirements, such as the Federal Acquisition Regulation and other government specific authorities, that limit decision-making in ways not typically found in business cases. Second, these cases must acknowledge the public accountability (tax dollars) aspect and the importance of mission outcomes (national security) inherent in defense procurement. Third, the congressional oversight role in acquisitions introduces stakeholder dynamics and reporting requirements absent from



private sector contexts. Fourth, classified information constraints present challenges for case development and distribution, necessitating a balance of pedagogical value and operational security.

In addition to the HBS case method adaptations, this research incorporated William Ellet's (2018) decision case structure as the foundational framework. Ellet distinguishes decision scenarios from evaluation and problem-diagnosis cases, defining a decision case as one in which a central protagonist must choose a course of action on a significant problem. The decision maker works with sufficient but incomplete information, and the case material is organized so readers must identify relevant facts, recognize constraints, and justify their recommendation. This structure aligns well with defense acquisition challenges, where personnel regularly face consequential decisions under uncertainty and within complex regulatory boundaries.

The adapted framework maintained the pedagogical rigor of business school cases while incorporating the regulatory complexity and mission emphasis characteristics of defense acquisitions. This approach enabled the development of a case study that is educational and relevant to acquisition professionals.

B. REFINEMENT OF ADAPTED FRAMEWORK

The second phase of case development consists of refining the adapted framework through insights from acquisition professionals, evaluation against pedagogical criteria and application of learning theories. By integrating perspectives from each, the framework evolved from the business school version to a form specialized for defense acquisition training.

1. Analysis of Semi-Structured Interviews

To capture insights from professionals with direct experience implementing innovative acquisition approaches, this research employed semi-structured interviews. This method allowed for focused exploration of specific topics while allowing flexibility to pursue emergent themes as participants shared their experiences. The interviews were transcribed and analyzed using thematic techniques to identify:



- Key decision points and major shifts within the CCAP, particularly where judgment under uncertainty was required.
- Challenges encountered in applying non-traditional acquisition approaches, including organizational and cultural barriers.
- Leadership actions and organizational factors that facilitated or impeded innovation.
- Lessons learned regarding effective decision-making under uncertainty.

The interview transcripts were also reviewed to extract insights and contextual details necessary for constructing the case narrative. When conversations were not feasible due to program schedule, publicly available program information provided contextual details that informed case development.

2. Pedagogical and Policy Evaluation Criteria

The design of the CCAP case study was evaluated against two sets of criteria: pedagogical effectiveness and alignment with policy objectives. Rather than test classroom effectiveness, the purpose of this evaluation was to determine whether the case met the criteria for a pedagogically rigorous decision case derived from the case-method literature and the policy priorities outlined in EO 14265.

Pedagogically, the case was assessed against conditions synthesized from case-method literature in Chapter III to determine its ability to:

- Present a realistic decision-making scenario that stimulates critical thinking and requires analysis and synthesis of complex information.
- Illustrate the application of acquisition principles and authorities in a practical context that mirrors real defense acquisition.
- Generate productive discussion through a well-structured dilemma and decision point, consistent with decision case design guidance.
- Support development of competencies identified in acquisition workforce frameworks.



- Avoid the limitations identified in Chapter III's review of existing acquisition case studies, such as solely descriptive narratives or retrospective audit reports.

From a policy perspective, the case was evaluated based on its relevance to the objectives outlined in EO 14265. Specifically, the challenge within the case encompasses the context for understanding when and how to apply a non-traditional approach effectively, and the adaptive decision-making necessary for rapid capability delivery. The policy-driven evaluation ensured the case addressed educational needs, as well as the acquisition reform priorities of speed, innovation, and workforce development (Executive Order No. 14265, 2025). Altogether, the pedagogical and policy criteria functioned as a design assessment of whether the case presented in Chapter V satisfies the conceptual requirements for a defense acquisition decision case.

3. Application of Relevant Theories

The framework refinement process was guided by four theoretical perspectives from the literature review: (1) Kolb's Experiential Learning Theory, which informed the case narrative structure; (2) competency-based education frameworks, which shaped learning objectives and assessment criteria; (3) decision-making under uncertainty theories, which guided content selection and deliberate ambiguity; and (4) CBL research, which informed the integration of conceptual readings and structured discussion to promote critical thinking. Each addresses a distinct aspect of professional skill development in acquisition contexts.

Kolb's (1984) Experiential Learning Theory provided the foundational structure for the case narrative, emphasizing concrete experience, reflective observation, abstract conceptualization, and active experimentation as interconnected stages of professional learning (Kolb, 1984). Kolb's theory influenced how the acquisition challenge was presented in the case, specifically the narrative structure to prompt analysis of what occurred and why, encourage extraction of principles, and require students to propose solutions. This approach ensures learners engage with the case at multiple cognitive levels.



Competency-based education frameworks shaped the learning objectives and assessment criteria embedded in the case design. Johnstone and Soares (2014) principles informed the case structure's focus on a decision-making scenario that requires students to analyze the situation and defend their decision, emphasizing the ability to apply knowledge and skills rather than simply recall content. This alignment with acquisition workforce competency models ensured the case supports the professional capabilities required in acquisition roles.

Decision-making under uncertainty theories, particularly Franke (2011) and related literature on judgment in complex environments, guided the selection of case content and the amount of ambiguity deliberately included in the case narrative. Acquisition professionals constantly deal with incomplete information, competing constraints, and evolving program conditions. These characteristics are intentionally incorporated in the case design to provide students the opportunity to practice analytical skills and critical thinking.

Case-based learning research shows that realistic cases coupled with targeted conceptual readings and used in guided analysis and structured dialogue, function as an active learning strategy that promotes critical thinking (Kaddoura, 2011; Popil, 2011; Silitubun et al., 2025). In this format, the case provides the decision situation, while the readings supply the analytic lenses and concepts the students must apply, test, and challenge as they interpret the problem and consider a course of action (Kaddoura, 2011; Popil, 2011; Silitubun et al., 2025). Intentionally designing the case activities around a real-world problem, open-ended discussion, and inquiry has shown to improve students critical thinking skills, while case-based frameworks in professional fields have demonstrated how sequencing the case discussion (i.e., initial diagnosis, option generation, critique, and reflection) can support critical thinking over time (Lavi & Marti, 2023). Applied to defense acquisition, the CCAP case and supplemented readings are structured to deliver content aligned with learning objectives and to require students to apply these concepts as they analyze the situation, compare alternatives, and defend a recommendation.

The above theories informed the selection of case subject and the structuring of the case narrative to maximize learning outcomes. By integrating these theoretical perspectives



throughout the framework development process, every decision was grounded in pedagogical and theoretical rigor. In instructional use, the case is intended to be paired with conceptual readings on decision-making under uncertainty and applicable innovative acquisition approaches. Together, the case provides the decision situations, while the associated reading supplies the abstract ideas and frameworks that students must apply, compare, and scrutinize through discussion.

C. ETHICAL CONSIDERATIONS

The third phase ensured the framework could be implemented ethically within defense acquisition contexts, particularly considering the challenges of studying an active program, and protection of Personally Identifiable Information and sensitive program information. These considerations shaped data collection methods and presentation of findings.

1. Data Handling

Data handling procedures addressed both research integrity and protection of program and personnel identity. The research relied on publicly available information and semi-structured interviews, and specific statements or decisions were not attributed to identifiable individuals. Due to the sensitive nature of the CCAP and the potential for professional implications, several strategies were employed to protect program information and personnel identity. Identifiers and non-essential details such as names, dates, and locations were changed to preclude direct association. Details that could disclose specific program information or personnel identities were omitted or generalized when not essential to learning objectives.

Throughout, the research sought to present decision-making contexts fairly and objectively, recognizing the complexity and constraints in which acquisition professionals operate. The strategies used preserved the pedagogical value of the case while protecting confidentiality and sensitive program information.



2. Implications of Studying an Active Program

The case study subject being an active and ongoing program whose circumstances continuously evolved during the research period introduced several limitations that had to be mitigated. This dynamic context introduced several limitations:

- Information that was current at the time of case development may be outdated or superseded by subsequent program events by the time of publication.
- Final outcomes and long-term consequences of key decisions were not yet known during the research timeframe.
- The sensitivity of the program limited the level of detail provided for certain aspects of decision-making.
- Participant perspectives were shaped by their current roles and relationships, which may have influenced how they described events or judgments.

To address these limitations, the research focused on decision points and processes rather than final outcomes to emphasize how program personnel framed challenges and made choices under uncertainty. This approach preserves the pedagogical value of the case. For future case study subjects, these limitations and mitigation strategies must be considered when working with a program of similar status.

The methodological approach described in this chapter provided a structured framework for developing an academically rigorous case study suitable for defense acquisition education, while maintaining appropriate ethical standards and protections. It does not assess whether the case study developed through this framework improves critical thinking when implemented in acquisition training. To determine effectiveness, the case study would have to be evaluated through classroom testing and a study of realized skill development, activities outside of this research scope. The purpose of this chapter was to demonstrate that theoretically grounded case studies suitable for defense acquisition education can be systematically created.

The following chapter illustrates the case study design framework through presentation of the CCAP case study developed using this process. Chapter V also presents



analysis of insights gained regarding case development and utility in the acquisition context, and practical considerations for effective implementation into the existing acquisition training structures.



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V. FINDINGS AND DISCUSSION

A. USING CCA TO INFORM A SAMPLE CASE STUDY

This chapter presents the findings of the research by showing how the CCAP informed the development of the AutoNex case study and how the case embodies the design principles detailed in Chapters III and IV. Chapter III identified what decision cases must do pedagogically: present realistic ambiguity, require judgment under uncertainty, and integrate theory with practice in a way that develops professional competencies. Chapter IV then translated these insights into a defense-specific case design framework that adapted the William Ellet decision case model and the HBS case method to the regulatory and policy environment of defense acquisitions. This chapter applies that framework to a specific case product. First, the chapter introduces the CCAP case study, providing the strategic context and acquisition challenge that frames the decision scenario. Second, the chapter presents the full case narrative and key decisions, demonstrating how the framework developed in Chapter IV translates into instructional content. Third, an analysis section examines what made this case suitable for developing critical thinking and decision-making skills, connecting the case design to the theoretical foundations established in Chapter III. Fourth, the teaching application section provides the pedagogical materials necessary for instructors to use this case effectively in acquisition education settings.

1. Context and Background of the Case

The case study presented in this chapter represents the application of the Chapter IV design framework to the CCAP. This program was selected for its complexity, innovation, and alignment with EO 14265's emphasis on developing acquisition workforce capabilities for non-traditional approaches. While specific details have been sanitized to protect program information and personnel identity, the case preserves the essential decision-making context, stakeholder dynamics, and analytical challenges that make the program a valuable subject for educational purposes.



Launched as a component of the NGAD family of systems, CCAP aims to develop autonomous unmanned aircraft that operate in coordinated teams with manned fighter aircraft, at a fraction of the cost of traditional platforms (Levin, 2025; Shephard, 2025). The program's strategic importance stems from its dual mandate to address the growing capability gap created by near-peer adversary modernization while demonstrating the DoD can execute a rapid, innovative acquisition at scale (Venable & Baker, 2025).

The case (Appendix A. Mini Case Study) is a disguised decision scenario drawn from the dynamics of the CCAP during the Technology Maturation and Risk Reduction (TMRR) phase. The CCAP selected five vendors for an initial sprint, then down-selected to two contractors to design, build, and test prototype aircraft under an accelerated schedule. Requirements were deliberately framed as flexible attributes to enable rapid pivots as technology, threat assessments, and design learning evolved.

Interviews with CCAP personnel consistently highlighted three areas of emphasis:

1. **Speed under uncertainty.** The threat environment demands accelerated capability delivery. The program set an 18-month timeline for preliminary design to first flight, where similar milestones could take years with traditional legacy programs. To maintain this schedule, the acquisition team is required to make continuous judgments beyond the typical adherence to process to deal with evolving requirements, emerging technology, and integration surprises.
2. **Deep collaboration during a dual competition.** The government team was embedded with both vendors kept in the competition, participating in design reviews, working groups, and shared digital infrastructure. The program used this approach to gain insight, accelerate problem-solving, and maintain influence, although risk increased due to blurred boundaries between oversight and design responsibility.
3. **Joint decision-making across technical, contractual, and organizational boundaries.** A key innovation was the joint Technical Review Board (TRB) where the government and contractor personnel



made integrated decisions on technical changes that affected cost, schedule, and performance. Also, the program used a dual decision-making model and an Integrated Product Team (IPT) (“fire team”) structure so government and contractor engineering, contracting, finance, and logistics stayed aligned on each change.

Interviewees pointed out several indicators that this approach is successful: the program had met all major milestones at the time of the case study; both prototypes began ground and flight testing less than 2-years after program start; and the relationship between the government and contractor remained transparent despite the competition and schedule pressure.

These factors make CCAP an ideal subject for CBL. The program presents the kind of ambiguity, competing constraints, and consequential decisions that case studies are designed to examine. Acquisition professionals studying this case encounter realistic scenarios that require judgment under uncertainty, exactly the capability EO 14265 seeks to develop across the acquisition workforce.

2. Strategic Acquisition Context

As detailed above, the acquisition challenge context is defined by several intersecting pressures. First, the traditional acquisition timelines of ten to fifteen years are strategically unacceptable when adversary capabilities are advancing rapidly. Second, the program’s scope requires integration of emerging technologies, including artificial intelligence, autonomous decision-making systems, and advanced sensors, that do not fit into legacy acquisition frameworks (DAF, 2022; Venable & Baker, 2025). Third, the program is tasked to achieve unit costs approximately one-third that of manned fighter aircraft, challenging traditional defense industrial approaches (DiMascio, 2025). Fourth, the program must maintain competition between contractors while fostering the collaboration necessary for complex systems integration.

Having outlined the real-world CCAP environment, this chapter now focuses on how those dynamics were translated into an educational tool. As Chapter IV described, the



research used an adapted decision case framework, the HBS case method with specific constraints, to convert real program patterns into a teachable decision situation.

The AutoNex case discussed for the remainder of the chapter is that teaching tool. AutoNex is a fictional case study, compressed and sanitized from interviews and publicly available information about the CCAP, that depicts a program with parallel contractor development, outcome-based requirements, and an integrated government-contractor governance structure. The case disguises patterns identified in multiple interviews from the real program into a compressed and anonymized narrative centered on distinct challenges of an innovative acquisition under uncertainty. In line with the literature on decision cases and CBL, the case is designed to provide enough context for analysis while purposely withholding the final decision so students must apply judgment (Ellet, 2018; Harvard Business School, n.d.; Kaddoura, 2011).

The acquisition challenge context includes several dimensions that create decision-making complexity:

1. **Technical Uncertainty:** The integration of autonomous systems with manned aircraft involves technologies that are still maturing. Requirements continue to evolve as operational concepts are refined and technology capabilities are better understood.
2. **Regulatory Ambiguity:** Traditional acquisition regulations were designed for stable requirements and sequential development. CCAP's iterative approach creates situations where regulatory guidance is unclear or potentially contradictory.
3. **Stakeholder Complexity:** The program involves multiple contractors, government agencies, congressional committees, and operational commands, each with distinct interests and perspectives that must be balanced.
4. **Time Pressure:** Schedule commitments to senior leadership and Congress create pressure that must be balanced against technical and programmatic realities.



These dimensions define the acquisition challenge context in which program personnel must make consequential decisions with incomplete information. The case study captures a specific decision point where these dimensions intersect, providing students with an opportunity to practice analytical skills and judgment.

3. Challenges and Success Indicators

The AutoNex case centers on a critical obsolescence issue: a navigation component vital to one contractor's aircraft architecture is being discontinued months before first flight. The problem forces a decision with significant implications for cost, schedule, performance, and competitive fairness. The fictional dilemma combined two circumstances described in interviews: (1) Vendor design decisions creating potential downstream supplier issues that were uncovered following an engineering change proposal and contract modification. (2) Urgent configuration and end-of-life problems that had to be resolved during negotiations. U.S. Air Force Major Tessa Quinlor (the lead contracting officer) must recommend one of three options with distinct cost, schedule, risk, and competition implications, paralleling the real programs trade-off between maintaining schedule and long-term technical integrity.

This scenario represents categories of acquisition challenges, such as supply chain disruptions, technology obsolescence, and requirement changes, that are relevant to any defense program. The specific challenges presented in the case include:

- **Technical Trade-offs:** Multiple solution paths exist, each with different implications for cost, schedule, technical risk, and production considerations. No option is clearly superior across all dimensions.
- **Collaboration Boundaries:** The program's emphasis on government-contractor collaboration must be balanced against the need to maintain competitive fairness and appropriate oversight.
- **Contract Negotiation Timing:** The crisis emerges during active contract negotiations, creating complexity around how to handle cost increases and schedule impacts.



- **Precedent Setting:** The decision made will establish expectations for how future problems are handled, affecting both contractors' behavior and the program's cultural principles.

These challenges will force students to integrate technical, contractual, and stakeholder considerations simultaneously, simulating the type of reasoning acquisition professionals may face in real-world innovative programs.

Success indicators for the case are not defined by a single correct answer but by the quality of analysis and judgment demonstrated by students. Effective responses to this case should demonstrate understanding of the full range of considerations, ability to evaluate trade-offs systematically, recognition of second-order effects, and development of recommendations that are defensible under scrutiny. These indicators align with the competencies identified in Chapter III as essential for acquisition professionals operating in complex, uncertain environments.

4. Overview of Case and Key Decisions

The full case narrative can be found at Appendix A. Mini Case Study. The following sections highlight essential elements of the case and explain their context. The narrative follows established conventions from business case writing, presenting the situation from the perspective of a protagonist facing a consequential decision. Names, dates, and identifying details have been changed to protect program and personnel information, but the fundamental decision-making context has been preserved.

5. Factors in Case That Enable Innovation

To show how innovative acquisition practices can be highlighted for learners, this section will detail the specific features of the case that embody innovation. AutoNex's construct mirrors several of the innovative CCAP practices described by DoD senior leaders and interviewees:

1. **Attributes-based requirement.** Instead of detailed specification, AutoNex uses attributes, such as range and teaming behaviors, to enable



vendors to innovate and the government to be flexible as learning progresses.

2. **Joint Technical Review Board.** Technical changes prompt a joint TRB process where the government and contractor review structured packages with cost, schedule, and performance impacts before deciding.
3. **Digital Integration.** The government has full access to the contractor's development systems and tools, which serves as the configuration-controlled "sources of truth" for TRBs, test observations and discussions, and design decisions.
4. **Fire Teams.** Cross-functional government IPTs align engineering, contracting, program management, and test to prevent fragmented discussions and to give each vendor a single point of contact for decisions.

These structures appear in the case as the governance process where the obsolescence issue is discovered, analyzed, and presented for decision. For students, they are examples of the acquisition principles and authorities discussed in earlier chapters by showing how they operate in practice.

6. Understanding the Decision Space

Chapter III argued that effective decision cases highlight the process of decision-making. The AutoNex case focuses on how decisions are framed, in line with the case design framework in Chapter IV.

Interviews describe an integrated decision process in the CCAP:

- Daily working-level collaboration between the government and contractor resolves many issues informally, leaving only consequential problems for the TRB.
- The TRB convenes when there is a cost, schedule, or technical change proposed; while the Test, Observation, and Issue (TOI) board meets on a weekly basis to review test issues and proposed fixes. Agreements for both boards are tracked in a shared digital system.



- Internal government teams headed by the program material leader determine when a decision triggers formal contractual action.

The AutoNex case condenses this decision process into a single TRB session. By the end of the board meeting, Maj Quinlor has completed the process and is confronted with making a recommendation. The narrative does not reveal the final choice, forcing the reader to reconstruct the reasoning process with the same information and under the similar constraints. This structure is intentionally aligned with the decision case principles from Chapter III and the adaptation of Ellet's decision case model discussed in Chapter IV.

7. Obstacles, Pivots, and Outcomes

The case highlights obstacles that align with the publicly available information and interview accounts of the CCAP:

- **Schedule Pressure vs. Technical Integrity.** Rapid prototyping and “concept to flight in under 2-years” increases risk of schedule slippage.
- **Collaboration vs. Fair Competition.** Continuous competition is a key aspect of the CCAP acquisition strategy, but a collaborative posture can invite a perception of favoritism if the government appears to help one vendor more than another.
- **Contracting Constraints and Precedent.** Issues arising during negotiations can create flexibility and risk based on how cost and schedule changes are handled, setting precedent for subsequent actions.

There is not a twist or major pivot in the case. Instead, the protagonist is forced to reframe a technical change to a multi-level acquisition decision with implications for precedent, contractor behavior, and acquisition strategy credibility. The case stops at the decision point so outcomes are not dictated by the narrative but generated and assessed by the reader, consistent with decision case methods described in Chapter III.

8. Analysis of Case Relevance

This section analyzes why the AutoNex case is suitable for developing critical thinking and decision-making skills among acquisition professionals. The analysis



examines what makes this an innovative acquisition approach, how the case aligns with executive guidance and acquisition principles, and what key decisions, leadership actions, and tools were employed.

What made this an “innovative” acquisition or successful approach to decision-making under uncertainty?

The AutoNex program represents innovation across multiple dimensions of defense acquisition. Understanding these innovations provides context for evaluating the decision-making challenges presented in the case. Drawing from public documents and interviews, several features demonstrate CCAP innovativeness:

1. **Joint governance and digital integration.** The government and contractor share technical decisions through joint boards and integrated digital systems. TRBs bring engineering, contracting, test, and program management together to evaluate changes as a single team, using common models and data. Shared, configuration-controlled digital engineering environments serve as the “source of truth” for requirements, designs, and test results, allowing both parties to see the same information in real time, trace decisions, and quickly assess cost, schedule, and performance impacts before committing to a path.
2. **Continuous, transparent competition with high collaboration.** The program’s “transparent competition” model challenges traditional acquisition assumptions about information sharing. By having government employees work closely with both contractors and facilitating lessons-learned sessions where contractors share challenges and solutions, the program created an environment of collaborative development unusual in competitive procurements.
3. **Iterative, “speed to ramp” acquisition.** The program emphasizes rapid prototyping, iterative capability uploads, and learning quickly from flight test rather than wait for a fully mature design. Traditional defense acquisition proceeds sequentially (design, then development, then



production) with extensive reviews at each phase. AutoNex compressed these phases by running parallel contractor efforts through TMRR, maintaining competition while accelerating development.

From the decision-making perspective, the AutoNex case deliberately embeds ambiguity, competing objectives, and uncertainty about long-term technical outcomes. Specifically, a compressed timeline with parallel development introduces decision-making challenges when problems emerge, illustrating the tension between the speed this innovation produces and the potentially decreased flexibility when unexpected issues arise. Similarly, transparent competition has improved program outcomes so far but presents more questions about appropriate boundaries in competitive acquisitions. However, these are the types of conditions CBL frameworks in Chapter III identify as necessary to practice sense-making and judgment (Franke, 2011; Lavi & Marti, 2023; Silitubun et al., 2025). By requiring students to process secondary effects, consider multiple perspectives, and weigh trade-offs, the case illustrates the theoretical mechanisms described in the literature.

9. Alignment with Executive Guidance and Acquisition Principles

The case aligns with the priorities established in EO 14265 in several ways:

Speed of Capability Delivery. Executive Order 14265 emphasizes “accelerating the delivery of warfighting capabilities” and reforming acquisition processes to emphasize “speed, flexibility, and execution” (Executive Order No. 14265, 2025, Sec. 2). The AutoNex program embodies this priority, and the case forces students to grapple with how schedule commitments should factor into technical decisions. The tension between maintaining the first flight date and selecting the best technical solution illustrates the real-world trade-offs acquisition professionals face when implementing accelerated acquisition strategies.

Non-Traditional Acquisition Approaches. The EO specifically calls for “templates and case studies of successful approaches for implementing innovative acquisition authorities” (Executive Order No. 14265, 2025, Sec. 5[c]). The AutoNex program’s use of parallel development, transparent competition, and collaborative problem-solving represents exactly the kind of innovative acquisition approach the order



seeks to grow. By presenting a case where these approaches encounter stress, students learn not just what innovative acquisition looks like, but how to sustain it when problems arise.

Workforce Development and Risk-Taking. The EO emphasizes the need to “modernize the duties and composition of the defense acquisition workforce” and “incentivize and reward risk-taking and innovation” (Executive Order No. 14265, 2025, Sec. 2). Major Quinlor’s role in the case illustrates what effective acquisition workforce development looks like in practice. Her experience in engineering, operations, and contracting, position her to navigate the complex trade-offs the decision requires. The case itself serves as a guide for developing similar capabilities in other acquisition professionals.

The EO further calls for field training teams that provide hands-on guidance and case studies of successful approaches for implementing innovative acquisition authorities (Executive Order No. 14265, 2025). The case, coupled with guided discussion and the teaching note, is intended to function as a case study exemplar. The subsequent appendices will serve as reusable instructional tools that field training teams or acquisition educators can employ to assist personnel in applying innovative authorities under realistic constraints.

10. Analysis of Decisions and Leadership Tools

The AutoNex case has the elements of a decision case as outlined in Chapter III. It is a realistic, bounded situation that forces readers to decide what is going on, what the problems are, and what should be done (Ellet, 2018; Harvard Business School, n.d.; Nohria, 2021). To make the case usable as a decision training tool, the narrative centers on several interrelated categories of decisions, leadership actions, and analytical tools that acquisition professionals should be able to employ.

Decision Analysis: The three options facing Maj Quinlor and the acquisition team require evaluation across multiple dimensions (cost, schedule, technical risk, production implications, competitive effects, and precedent-setting consequences). Students must develop frameworks for weighing factors and defending their weighting choices. This mirrors the decision environment acquisition professionals face regularly, where one dimension does not capture the overall value.



Stakeholder Analysis: Effective decision-making requires understanding the perspectives and interests of multiple stakeholders. In this case, students must consider the government program office, Renvora, Stravelis, Congress, end-users, and the broader defense acquisition community. Each stakeholder has legitimate interests that may conflict with others, and acquisition professionals are tasked with finding solutions that appropriately balance these interests.

Analysis of Second-Order Effects: Maj Quinlor’s closing statement: “I want to make sure we’re considering the full range of second-order effects,” signifies the importance of thinking beyond immediate consequences. Each option has implications that extend beyond the immediate crisis like effects on contractor behavior, program culture, and future acquisition approaches. Developing the capacity to identify and evaluate these second-order effects is essential for acquisition professionals operating in complex systems.

Boundary Management: The case raises fundamental questions about the appropriate boundaries between government and contractor roles. The “transparent competition” model works when interests align; the obsolescence crisis tests what happens when they conflict. Students must develop judgment about when collaboration is appropriate, when oversight is required, and how to navigate the space between.

These analyses are embedded within a broader set of leadership actions that reflect the behaviors and culture identified in interviews. Col Benvor’s three principles: “no surprises, transparent communication, and solve problems together,” establishes a collaborative environment; while Maj Quinlor’s conduct at the TRB models contracting leadership behavior that balances stewardship of taxpayer resources with mission urgency, and recognizes the precedence her recommendation will set.

The tools that support these decisions are the same structures highlighted in the CCAP findings and design framework: the joint TRB, fire teams, attributes-based requirements, and integrated digital environments. Together, they show how institutional processes can be designed to support judgment under uncertainty. This connects the case to the case design criteria in Chapter IV by placing a decision-maker at the center,



integrating regulatory and policy constraints, and using organizational tools as part of decision-making.

11. Teaching Application

This section explains how the AutoNex case is intended to be used instructionally and how it connects back to CBL concepts. It provides the pedagogical materials necessary for instructors to use the AutoNex case effectively in acquisition education settings. The materials are designed to support the learning objectives identified in Chapter III and to align with the case development framework presented in Chapter IV.

a. Applicable Dilemmas and Lessons for Acquisition Professionals

The AutoNex case is designed to demonstrate several dilemmas that acquisition professionals may face in innovative programs:

1. **Collaboration vs. competition.** Helping Renvora solve its problem may be in the program's best interest, but it could provide an advantage to one vendor over another. The case illustrates how acquisition professionals must balance program optimization with the fairness principles that are the foundation of competitive procurement.
2. **Schedule vs. technical integrity.** The case forces a choice between preserving schedule commitments (Option 1) and pursuing technically superior solutions (Options 2 or 3). This dilemma appears in nearly every acquisition program, directly supporting acquisition professionals' development of judgment about when schedule flexibility is warranted and how to effectively communicate changes to stakeholders.
3. **Short-term fixes vs. long-term precedent.** Option 1 improves the immediate prototype phase but creates problems for production. Option 3 creates short-term costs and delays but positions the program better for the long term. Acquisition professionals must cultivate the ability to evaluate trade-offs, especially when they must advocate for long-term optimization when short-term pressures dominate.



4. **Oversight vs. empowerment.** The program’s emphasis on collaboration creates expectations that the government will help solve problems. But it is the acquisition team’s responsibility to protect government interests. The lesson here is balancing accountability with the desire to have contractors take risk and innovate.

These dilemmas link directly to the competencies emphasized in Chapter III, such as judgment, framing, and reflection, and the policy objectives in Chapter IV (Franke, 2011; Johnstone & Soares, 2014; Kolb, 1984). The case is intended to teach specific acquisition lessons and build transferable patterns of thinking that can be applied to other contexts.

b. Suggesting Discussion Questions

Chapter III noted that decision cases work best with open questions that force students to orient themselves, process information, and develop independent analyses (Schröter & Röber, 2022; Lavi & Marti, 2023; Nohria, 2021). To elicit a productive discussion, four core questions should be posed, with additional probes and anecdotes in the teaching note in Appendix C:

1. Which option should Maj Quinlor recommend, and why?
2. How collaborative should the government be in this situation?
3. What are the appropriate boundaries between government and contractor in a “transparent competition” acquisition strategy?
4. How will the decision affect Stravelis, future contractor behavior, program credibility, and the AutoNex acquisition approach overall?

Instructors and field training teams can use these questions to structure discussion phases that mirror the analytical steps outlined in Chapter IV (initial diagnosis, option generation, critique, and reflection) (Lavi & Marti, 2023).



c. Topics for Student Debate

To deepen engagement and encourage students to articulate and defend contrasting positions, the case supports several debate topics that can be used to structure more focused discussions:

1. Role of schedule: “In rapid prototyping programs, schedule should rarely be sacrificed for technical perfection.”
2. Extent of collaboration: “In transparent competition strategies, the government should prioritize collaborative problem-solving.”
3. Allocation of risk: “Contractors should bear primary responsibility for managing component obsolescence in innovative programs.”

These prompts are aligned with the learning outcomes described in Chapter III (such as managing ambiguity, integrating multiple perspectives, and reflecting on trade-offs), and can be used for in-class debates or written reflections.

12. Supplemental Teaching Note

A teaching note (Appendix C) accompanies the AutoNex case. In line with case method literature in Chapter III, the note is intended to assist instructors in case-based teaching and is structured to help them utilize the case with minimal preparation, while preserving flexibility to adapt it for different acquisition audiences. The teaching note follows a standard sequence: synopsis, audience, purpose and learning objectives, pre-readings and assignment questions, theoretical and analytical frameworks, teaching plan, and a summary that links the discussion back to DoD directives or unit-level implications.

a. Synopsis of the Case

The teaching note begins with a concise synopsis that orients the instructor to the AutoNex scenario. It summarizes the program context, the obsolescence issue with the navigation module, the role of the joint TRB, and the decision dilemma Maj Quinlor is facing. The synopsis highlights the central tension so instructors can quickly recall the narrative and key objectives.



b. The Intended Audience for the Case

The note specifies the primary audience as mid-career acquisition professionals (GS-12 equivalent or above) with foundational knowledge of acquisition processes. It also identifies secondary audiences such as students in courses for defense acquisition, program management, contracting, or organizational decision-making, when given appropriate background readings. For each audience, the note suggests how the instructor might emphasize different elements of the case, for example contract structure for contracting or governance and risk for program management.

c. Purpose and Learning Objectives

The teaching note states the overall purpose as giving learners a realistic opportunity to practice decision-making under uncertainty in an innovative acquisition environment. It then lists learning objectives, such as:

1. Analyze trade-offs in defense acquisition decisions involving cost, schedule, and technical risk.
2. Evaluate appropriate boundaries for government-contractor collaboration in competitive programs.
3. Assess second-order effects and precedent-setting implications of acquisition decisions.
4. Develop judgment about when to be prescriptive versus collaborative in oversight.

The key issues section briefly explains how each objective is expressed in the case.

d. Suggested Pre-Reading and Assignment Questions

Consistent with the literature on case development, the teaching note provides a list of references and suggested readings. This includes EO 14265, relevant acquisition policy, and short readings on decision-making under uncertainty. For training environments where pre-reading is unrealistic, the note recommends that instructors provide a brief in-class overview of the context and key concepts before starting the case.



The teaching note then offers various assignment questions that can be given to students in advance or at the start of training. These are similar to the discussion questions listed in this chapter. Instructors are encouraged to select the set of questions that best aligns with their learning objectives and time constraints.

e. Conceptual Frameworks

The teaching note identifies theoretical lenses that the case is designed to invoke. These include experiential and CBL concepts, decision case principles, and sense-making in complex environments. The note explains how instructors can prompt these ideas, such as asking students to reflect on how their reasoning changed over the course of the discussion.

f. Practical Tools for Case Analysis

The note also outlines practical tools instructors can choose to emphasize during the discussion, such as trade-off matrices, stakeholder mapping, or decision trees. It explains how these tools can be used in class to help students visualize their process and reinforce habits that are transferable to other acquisition problems.

g. Using Teaching Plans

The teaching plan provides a 90-minute session outline that instructors can tailor to their context. It is organized into the following phases with correlated timeframes:

- Group Discussion (20 minutes): After the instructor recaps the case and assignment questions, students work in small groups to identify the problem, evaluate options, and prepare a recommendation. The teaching note provides prompts to keep groups focused.
- Group Presentation (20 minutes): All or selected groups present their analyses and recommendation. The notes suggest each group state the recommendation, justification, and associated risks.
- Instructor Comments and Summary of Group Presentations (15 minutes):
During or after presentations, the instructor will use a “board plan” to record



arguments. The teaching note provides an example board plan and suggests how to use it to manage time and compare groups' reasoning.

- Case Discussion and Analysis (25 minutes): The instructor facilitates a whole-class discussion, with an option to incorporate board work, directed at answering the assignment questions. The teaching note suggests a sequence of questions that transition from descriptive, to diagnostic, to assessment. The last phase is where instructors can introduce the theoretical and analytical frameworks identified earlier.
- Summary (10 minutes): The session ends with instructor-led synthesis that ties the discussion back to readings, references, and relevant service-level guidance. The teaching note offers a list of “take-away messages” for DoD or unit-level use, for example how to design governance mechanisms that enable speed while preserving oversight.

This structured teaching note turns the AutoNex case from a research product into a practical tool for educators and field training teams. The organization further connects to the theoretical and design foundations developed in Chapters III and IV and shows how to translate those foundations into an actual educational instrument.

13. Leveraging the Case Learning Format

This section connects the AutoNex case study to the case learning format proposed in Chapter IV. The case functions as a William Ellet decision case because it is centered on a protagonist who is confronted with a dilemma with no “right answer” (Ellet, 2018). Together, these elements form an integrated framework: Chapter III’s literature review explains why well-designed cases can cultivate judgment under uncertainty; Chapter IV’s case design framework translates those insights into criteria for content selection, structure, and alignment with EO 14265; and Chapter V’s AutoNex case shows how those criteria operate in practice when applied to an actual defense acquisition program.

a. Validation Against Case Study Definitions

The AutoNex case aligns with the scholarly definitions of case studies reviewed in Chapter III:



Yin's Definition. Yin (2014) defines a case study as “an empirical inquiry that investigates a contemporary phenomenon (the ‘case’) in depth and within its real-world context, especially when the boundaries between phenomenon and context may not be clear” (p. 16). The AutoNex was deliberately structured so that the component obsolescence decision cannot be isolated from the broader program dynamics, like contractor relationships, schedule pressures, program governance structures, and regulatory environment. This design recognizes programmatic decisions are usually interconnected and effective judgment requires weighing factors simultaneously, and it forces students to practice the kind of contextual reasoning acquisition professionals must use daily.

Stake's Definition. Stake (1995) distinguishes between intrinsic case studies (the case is the focus), instrumental case studies (used to understand broader issues), and collective case studies (exploration of multiple instrumental cases). The AutoNex case functions as an instrumental case study because it uses a specific program situation (obsolescence decisions) to highlight broader challenges in defense acquisitions (managing risk and trade-offs in rapid acquisitions). To give students a manageable frame of analysis and the opportunity to practice extracting transferable principles, the case is bounded in time (specific decision point), place (program office), and scope (component obsolescence decision).

Merriam's Definition. Merriam (1998) identifies three features of case studies: particularistic (focusing on a specific situation), descriptive (providing rich detail), and heuristic (helping readers gain better understanding). The AutoNex case leverages all three. Its particularistic focus on a specific decision point forces students to commit to a recommendation. The description of the program history, governance mechanisms, and stakeholder perspectives, provides the material for analysis without predetermining conclusions. The heuristic design means the case does not have a singular right answer; instead, it develops judgment by requiring students to consider all options and defend their reasoning, mirroring how acquisition professionals must operate when policies and regulations provide frameworks but not solutions.



b. Satisfying HBS Case Method Criteria

The AutoNex case incorporates the key elements of the HBS case method as adapted for defense acquisition in Chapter IV:

1. **Protagonist Facing a Consequential Decision.** The case centers on Maj Quinlor, who must make a recommendation that will affect a \$700 million contract, competitive dynamics between contractors, and the program's credibility with Congress. The protagonist is positioned to require action (she cannot avoid making a decision at the TRB).
2. **Sufficient but Incomplete Information.** The case provides technical details of the three options, cost and schedule implications, and stakeholder perspectives, program history to support informed analysis, while deliberately leaving gaps that require judgment. Students do not know exactly how requirement owners or Congress will react to schedule delays, how Stravelis will respond to different decisions, or what technical risks will emerge.
3. **Ambiguity Requiring Judgment.** No option is clearly superior across all dimensions. Students must develop and defend their own weighting of factors. The case resists a simple "right answer" analysis and instead rewards quality of reasoning.
4. **Integration of Multiple Perspectives.** The case requires students to consider the perspectives of multiple stakeholders (the government program office, Renvora, Stravelis, Congress, operational commands) whose interests may conflict. Effective analysis requires understanding and balancing these perspectives.

Together, these elements ensure AutoNex functions as an HBS-style case and that it creates conditions where students must practice the critical thinking and decision-making competencies that support the acquisition workforce development described in EO 14265.



c. Integrating Ellet's Decision Case Framework

William Ellet's (2018) framework for decision cases informed the case structure, as described in Chapter IV. The AutoNex case satisfies Ellet's criteria:

- **Clear Decision-Maker.** Maj Quinlor is positioned as the decision-maker. While the ultimate decision will be made by Col Benvor or others, the case asks students to develop Maj Quinlor's recommendation, placing them in her role.
- **Significant Problem.** The component obsolescence issue has significant implications for cost, schedule, competition, and program credibility.
- **Defined Options.** The case presents three defined technical options, each with different implications. The instructor may allow students to develop hybrid options or alternatives not presented, but the defined options structure initial analysis.
- **Constraint Recognition.** The case presents constraints (schedule commitments, budget limitations, competition requirements, regulations) that bound possible solutions. Effective recommendations must work within these constraints or explicitly acknowledge trade-offs.

These criteria collectively ensure students engage in structured analysis rather than generalized debate, and develop recommendations grounded in evidence and bounded by realistic constraints.

d. Alignment with Theoretical Foundations

The case design aligns with the theoretical foundations established in Chapter III:

Kolb's Experiential Learning Theory. The case structure supports all four stages of Kolb's (1984) learning cycle. Students have a concrete experience through engaging with the case narrative. They engage in reflective observation by analyzing what happened and why. They then move to abstract conceptualization by extracting decision-making principles. Finally, they engage in active experimentation by developing and defending their recommendations. This sequencing allows instructors to cycle students through the full experiential learning process.



Competency-Based Education. The case supports development of competencies rather than simple recall of acquisition rules. The teaching plan and case target specific competencies identified in Chapter III such as evaluating trade-offs and developing defensible recommendations. Students must also demonstrate abilities that can be observed and assessed through answering discussion questions and completing debrief prompts.

Decision-Making Under Uncertainty. Consistent with Franke’s (2011) description of decision-making in complex environments, the case forces students to act without full information, practice pattern recognition, and reflect on the quality of their reasoning. This design supports the development of judgment in ambiguous situations characteristic of innovative defense acquisition.

These three frameworks are reinforcing: experiential learning provides the pedagogical structure, competency-based education defines what students should be able to do, and decision-making under uncertainty reflects the operational reality the case prepares them to navigate.

e. Distinction from Existing Defense Acquisition Case Studies

Chapter III identified that existing defense acquisition case studies often function as descriptive reports rather than pedagogical instruments. The AutoNex case addresses these limitations:

Table 3. Comparison of AutoNex Case with Typical Defense Acquisition Case Studies

Characteristic	Typical DoD Case Studies	AutoNex Case
Primary Purpose	Document program history; inform policy	Develop decision-making and critical thinking skills
Narrative Structure	Retrospective; outcomes known	Prospective; outcome undefined
Decision Points	Described but not structured for analysis	Explicitly structured with options and trade-offs
Facilitation Guidance	Rarely provided	Comprehensive teaching note included
Student Engagement	Passive reading and discussion	Active analysis and recommendation development
Learning Assessment	Knowledge recall	Demonstrated reasoning and judgment

Note: Table created by authors based on synthesis of information cited previously in document.



This comparison demonstrates that the AutoNex case addresses the pedagogical gaps identified in Chapter III's review of publicly available defense acquisition case studies. By designing for active learning and skill development rather than passive information transfer, the case supports the workforce development objectives of Executive Order 14265

B. PERSPECTIVES GAINED FROM FORMING THE CASE STUDY

This case study examines staff working to support the procurement of a new, state-of-the-art defense weapon system. The staff is composed of multiple stakeholders desiring consensus on a systems integration effort. Although the story's account is fictional, it represents practical challenges experienced by acquisition professionals, notably those working within the CCAP office. To prepare for the design and development of the study, the student research team took a qualitative approach, gathering data from interviews and literature to help frame the study's intent: to provide a sample case that can serve as a replicable guide (through templates and established frameworks) for defense acquisition training. To illustrate this point, the research team incorporated social context and key decisions points. The study also included teaching notes, learning objectives, and discussion questions.

Although many cases tend to highlight decision points (Schramm, 1971), case studies themselves are not merely decision exercises – they also require consideration of judgement, risk, context, and systematic constraints (Kem, 2006). It is important to understand that decision spaces in defense acquisition are rarely matters of right and wrong but are instead grounded in risk management, not avoidance (FAR 1.102-2, n.d.). This becomes increasingly relevant in high-staking environments where constant tradeoffs are being made under time, cost, and schedule constraints. To obtain this level of insight, student researchers required multiple perspectives to balance the realism and teaching suitably needs of the case. Gaining diverse perspectives can be challenging when cases center on individuals or circumstances requiring intimate knowledge of a matter. Individuals may relocate, retire, be reassigned, or otherwise be unavailable – creating data



collection risk. Fortunately, these kinds of risks are less concerning when case studies can rely on open-source information in lieu of interview-based data.

The crosswalk below bridges concepts between our team’s case method approach (adapted from the HBS method), Kolb’s Experiential Learning Theory, and elements of the DoD Contracting Competency Model (2024). It was developed by synthesizing findings from the literature review and is intended to help readers understand the linkages between theory and practice. The far-left column begins the crosswalk and addresses three components adapted from the HBS method. These three components were then analyzed alongside Kolb’s learning cycle and the DoD Contracting model (2024), since our literature review showed that these frameworks are essential for understanding how learning occurs and for identifying the competencies the DoD prioritizes in acquisition professionals. In this view, the team’s adapted case method complements Kolb’s theory and naturally cultivates many of the competencies required by the DoD model.

Table 4. How the Case Method Drives Competency

Methodological Crosswalk				
Case Method Approach (Adapted from HBS)	Integrating Kolb’s Experiential Learning	Alignment with DoD Contracting Competencies	Researchers Action Taken	Importance
Step 1: Create realistic cases using narrative that illuminate challenges, policy, and organizational constraints	CE – Concrete Experience RO – Reflective Observation	Contextual Awareness & Problem Framing	Identifies topic, motive, objectives, and central questions. Begin information collection via interviews and literature.	Builds situational awareness of the factors that affect acquisition outcomes
Step 2: Create teaching notes to facilitate guided learning	RO – Reflective Observation AC – Abstract Conceptualization	Critical Thinking & Analytical Reasoning	Continue to collect and analyze data. Extract decision points and develop guidance for facilitation.	Supports analysis using structured approach, ensuring reasoning and meaningfulness conveyed
Step 3: Ensure learning objectives align with DoD contracting competencies	AC – Abstract Conceptualization AE – Active Experimentation	Decision-Making & Strategic Execution	Synthesize data. Develop takeaways and connect those to learning objectives, competencies, and regulatory guidance	Develops ability to select appropriate pathways, justify decisions, and balance speed, innovation, and risk.

Note: Table created by the authors using multiple sources: Hammond (2002); Kolb (1984); OUSD(A&S, 2024).



Each step of the crosswalk reinforces the previous, strengthening learner comprehension and supporting more effective instructional facilitation. When these steps and frameworks are combined, greater value can be achieved for all stakeholders – including learners, facilitators, and managing officials. The overarching idea is that a structured approach to developing cases is needed in defense acquisition, and such an approach should intentionally integrate realistic narratives, learning processes, and acquisition competencies.

In addition to methodological insights, the research team also identified key characteristics exhibited in the case. These characteristics emphasized not only individuals' roles, but also addressed events, situations, programs, and activities (Hancock et al., 2021). Each is described below.

1. Individuals consisted of government and contractor support staff, including contracting officers, program managers, and engineers. Each group held unique responsibilities but shared responsibility for executing program tasks.
2. Events consisted of congressional testimonies, technical reviews, and other office meetings. In addition, references were made to timelines and important milestones.
3. Situations addressed contextual factors such as technical, programmatic, and organization implications.
4. Programs identified level of visibility and stakeholders beyond the immediate staff.
5. Activities included assessments, meeting preparation, and strategy development.

C. UTILITY OF THE CASE METHOD IN ACQUISITION TRAINING

The target audience for this study was described in Chapter One and included senior OSD officials, DAU practitioners, field training teams, and members of the acquisition workforce. This study provides utility for each group by offering literature, a sample case,



and a template to support the management and execution of tasks aligning with the objectives of EO 14265 – which emphasizes speed, innovation, and workforce adaptability. For OSD officials who oversee procurement organizations, this study offers a framework for developing cases that not only hold pedagogical value but can be standardized across the defense acquisition enterprise. This is important because structuring CBL within programs is one actionable way to meet the improved acquisition outcomes envisioned in the EO.

For field training teams and educational platforms like DAU, this study provides insight into case design frameworks that can be adopted and replicated. This means that our adapted case method serves as a reusable structure that can support multiple functional areas and instructional needs. It also means DAU can incorporate the case into existing curricula, whether through computer-based training or in-person instruction.

For defense acquisition professionals, this study offers a realistic scenario that can be openly discussed for training purposes (particularly in making trade-off decisions, dealing with stakeholder pressures, applying acquisition strategies, identifying risks, etc.). Traditional group training sessions often rely on slide presentations that are not competency aligned. However, in the same amount of time, CBL can encourage collaboration, feedback, and learner engagement.

The DoD Contracting Competency Model (2024) outlines 31 competencies. CBL can support these functions by modeling scenarios tailored toward competency development. Depending on the depth of a study, multiple competencies can be addressed within a single case. Accordingly, the study delivers benefits to multiple parties, whether they serve in a managerial role, a facilitator role, or a student role.

D. IMPLEMENTING THE CASE METHOD INTO EXISTING STRUCTURES

An NPS study by Theresa C. Bensch found “DAU training to be a key contributor to implementing defense acquisition change by driving policy-compliant behavior change in the defense acquisition workforce” (Bensch, 2018, p.278). Using DAU-provided survey data and regression analysis, Bensch’s study sought to understand how DAU drives



behavior. Her analysis ultimately showed that “students learned new concepts in all DAU policy training courses and that the most important predictor of learning achieved is career benefit” (Bensch, 2018, p. 278). Since DAU’s establishment in 1992 (as part of a broader wave of earlier acquisition reform), the institution has become the primary training source for the entire defense acquisition workforce (Layton, 2003). As a result, its influence on the DoD’s learning culture is unmatched outside of internal office mentoring and coaching. This is why any major reform efforts should consider integration within DAU curricula and programs.

Although facilitation responsibilities should not fall solely on DAU, published RAND reports show that case studies and CBL are already used in PME (Wong et al., 2022). Therefore, DAU could serve as a catalyst for standardizing case-based instruction across the acquisition enterprise. As recently as 2022, DAU launched its “Back-to-Basics” (BtB) initiative, described as “the most significant transformation to the certification program in nearly 30 years” (Dowling & Pollack, 2022, p. 19), signaling continuing momentum towards workforce modernization efforts.

Enablement for BtB was driven by the Contracting Certification Taskforce (CCT) and leading representatives from organizations across defense acquisition, notably DPCAP (Dowling & Pollack, 2022, p. 19). To develop the BtB framework, the institution leveraged the 31 common competencies (Dowling & Pollack, 2022, p.19). However, the demand for more innovative and adaptive learning approaches has continued to grow. In recent interviews, the Secretary of War (SOW) stated DAU “will prioritize cohort-based programs combining experimental and project-based learning on real portfolio challenges, industry-government exchanges, and case method instruction that develops critical thinking” (Serbu, 2025).

The processes that drove BtB were highly effective and transformative – culminating in a complete streamlining of defense acquisition training (Dowling & Pollack, 2022). Likewise, drivers for case-based training across existing structures will depend on multiple stakeholders, including those internal and external to acquisition programs. This is why the target audience for this study consisted of OSD officials, educational institutions, field teams, and acquisition professionals. Each will have a particular role in



CBL instrumentation, and each will rely on the other for feedback to ensure meaningful cases are developed that drive better thinking and decision making.

The graphic below represents a step-by-step implementation framework senior leaders could utilize to institutionalized case studies. Key stakeholders would include project teams, senior level procurement acquisition executives, fielding teams, and learning institutions such as DAU.

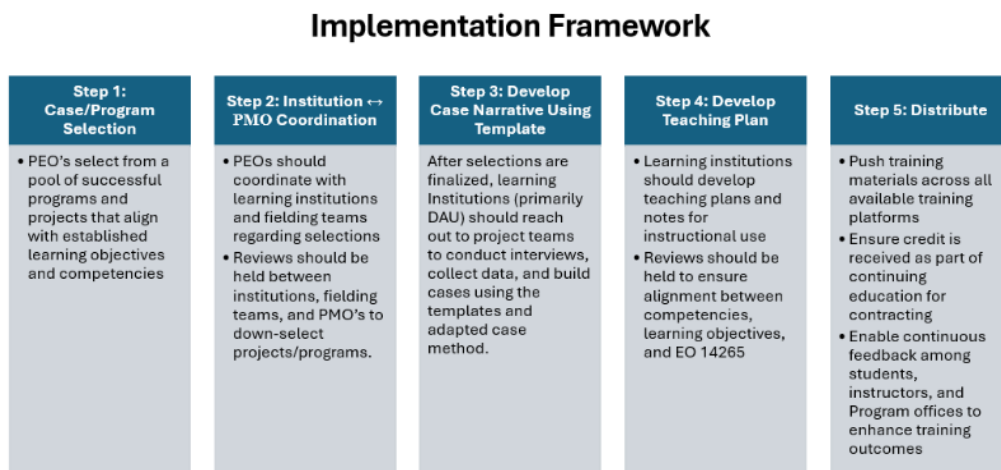


Figure 1. A Five Step Process for Case Implementation

Implementation could begin by selecting from a pool of successful programs and contracted. Based on the desired competencies and learning objectives (particularly those involving innovate approaches or navigating ambiguous context), learning institutions and field team should coordinate with program offices to request the information needed to create practical narratives using the reusable template. After developing the teaching plan and ensuring alignment with objectives and competencies, cases should be distributed through in-person training or web-based instruction. Efforts (cases) can also be sent to training managers within local procurement organizations for distribution and facilitation. Other alternatives could include DAU offering train-the-trainer seminars to ensure proper facilitation of case-based instruction within local program offices. Collectively, these efforts would support EO reform and enhance training for the acquisition workforce.

VI. CONCLUSION

This chapter concludes the thesis by summarizing the key findings from the research, drawing conclusions about the role of CBL in defense acquisition education, and offering recommendations for implementation. The research was guided by a primary question and three secondary questions, each addressed through a literature review, interviews with acquisition professionals, and development of a case study based on the CCAP. The chapter is organized into seven sections. First, a summary of key findings recaps the research questions and synthesizes insights from the literature and case study. Second, the implications for acquisition policy and education examine how case studies can enhance innovation and learning, with recommendations for DAU, field training teams, and PME programs. Third, a proposed framework for case integration in acquisition training outlines how CBL can be systematically embedded within existing educational structures. Fourth, recommendations for OSD and field training teams address scalable templates, faculty guidance, and case repositories, including a proposed case study development template that can serve as a model for future acquisition-focused cases. Fifth, the policy implications and strategic value of CBL are examined in the context of EO 14265 and broader acquisition reform objectives. Sixth, the limitations of the study are acknowledged, including access constraints, generalizability concerns, and the challenges of studying programs under evolving guidance. Finally, areas for future research are identified, including testing case study effectiveness in classroom and field settings, exploring additional case studies across acquisition authorities, and developing a formal repository or database for validated acquisition case studies.

A. SUMMARY OF FINDINGS

The goal of this study was to explore how the DoD can respond to EO 14265's directive to expand the use of case studies by developing a prototype decision case based on the CCAP (Executive Order No. 14265, 2025). The research focused on how CBL could improve critical thinking and decision-making among defense acquisition professionals, specifically in contexts that use innovative acquisition approaches.



1. Recap of Research Questions and Answers

The primary research question asked: How can CBL be designed to improve critical thinking and decision-making among DoD acquisition professionals? The findings suggest CBL can cultivate these capabilities when they:

- Contain realistic, bounded decision situations that mirror the ambiguity and constraint patterns found in acquisition programs like CCA (Merriam, 1998, as cited in Yazan, 2015; Stake, 1995, as cited in Yazan, 2015).
- Demand students analyze incomplete information, weigh trade-offs, and defend a recommendation, rather than simply recall regulations or procedures (Franke, 2011; Nohria, 2021).
- Are combined with guided discussion, analytic tools, and conceptual readings that help students connect their reasoning to acquisition principles (Donham 1922; Jain, 2005).

With this framework, CBL enhances judgment under uncertainty by allowing acquisition personnel to practice sense-making and decision processes in educational settings that reflect the pressures seen in real programs (Franke, 2011; Nohria, 2021).

The research indicates that CBL can improve critical thinking and decision-making by providing acquisition professionals with structured opportunities to practice judgment under uncertainty in realistic scenarios. Unlike conventional training methods that emphasize procedural compliance and content recall, CBL engages learners in active analysis, synthesis, and evaluation of complex acquisition challenges. The literature consistently demonstrated that well-designed cases develop meta-skills essential to acquisition work: preparation, discernment, judgment, collaboration, curiosity, and self-confidence (Franke, 2011; McDade, 1995; Nohria, 2021). The AutoNex case developed from CCAP research illustrated how these principles translate into defense acquisition contexts by presenting a decision scenario that required learners to weigh cost, schedule, and performance trade-offs while navigating regulatory constraints and stakeholder dynamics.

Three secondary research questions further guided the study:



Secondary Question 1: *What existing types of case studies are currently used in DoD acquisition education programs and how relevant are they to today's acquisition challenges?*

The literature review indicated although case studies are commonly used in law, business, and medicine, their use in defense acquisition has been limited and methodologically inconsistent. Across the GAO and RAND materials reviewed, most case studies read as descriptive reports rather than decision-focused teaching tools. In this review, none provided explicit decision points, facilitation guidance, or structured analytical frameworks designed to promote critical thinking. Most cases presented historical narratives of program events and decisions without the deliberate ambiguity and analytical demands characteristic of effective teaching cases (Nohria, 2021). While these materials provide documentation of acquisition practices, they lack the design elements necessary to develop the judgment and decision-making capabilities that EO 14265 emphasizes. The gap between available case materials and the Harvard Business School model benchmark represents a significant opportunity for acquisition workforce development.

Secondary Research Question 2: *What are the key characteristics of effective case studies for defense acquisition training and development?*

Throughout the literature and framework developed in Chapter IV, several essential features emerged that distinguish teaching cases from descriptive narratives (Ellet, 2007; Merriam, 1998, as cited in Yazan, 2015; Nohria, 2021; Stake, 1995; Yin, 2018):

1. A bounded decision scenario centered on a protagonist facing a consequential choice under uncertainty
2. Provide sufficient contextual information while deliberately withholding the final decision to require learner analysis
3. Incorporate ambiguity that mirrors the incomplete information acquisition professionals typically face



4. Integrate regulatory frameworks, stakeholder dynamics, and mission constraints specific to defense acquisition
5. Include teaching notes that guide instructors through learning objectives, discussion questions, and facilitation strategies
6. Align with acquisition workforce competencies and strategic priorities outlined in executive guidance

Additionally, research from Herreid et al. (2016) emphasized that cases do not need to be entirely factual but must feel real to be an effective instructional tool. This finding informed the research team's decision to develop a disguised case that preserved the pedagogical dynamics of CCAP while protecting sensitive program information and personnel identity.

Secondary Research Question 3: *How can case studies be effectively developed and applied to defense acquisition decision-making?*

The research developed a framework for creating acquisition case studies that addresses this question. The first phase adapts the HBS case method for defense acquisition contexts by integrating statutory and regulatory requirements, acknowledging public accountability and mission outcomes, recognizing congressional oversight dimensions, and incorporating William Ellet's decision case structure (Ellet, 2018; Nohria, 2021). The second phase refines the adapted framework through analysis of semi-structured interviews with acquisition professionals, evaluation against pedagogical and policy criteria, and application of relevant learning theories including Kolb's experiential learning model and competency-based education principles (Johnstone & Soares, 2014; Kaddoura, 2011; Kolb, 1984). The third phase addresses ethical considerations including protection of program and personnel identity, and the limitations inherent in studying active programs.

Application of this framework to CCAP produced the AutoNex case study, which demonstrates how innovative acquisition practices can be captured and translated into teachable decision scenarios. The case embodies attributes-based requirements, joint technical review boards, digital integration between government and contractor teams, and



cross-functional fire team structures that characterize an innovative acquisition approach (CCAP Office Official, interview with author October 01, 2025).

2. Insights from Literature and the Case Study

Several insights emerged from the synthesis of literature review findings and case study development:

1. Case-based learning complements rather than replaces other training methods. Evidence from business, law, medicine, and public administration indicates that CBL is most effective when integrated with other pedagogical approaches (Herreid et al., 2016; Nohria, 2021; Schroter & Rober, 2022). Cases excel at developing judgment, integration of multiple perspectives, and decision-making under uncertainty, but foundational knowledge and technical skills may be more efficiently conveyed through lectures or readings. Defense acquisition training should strategically deploy CBL for objectives it serves best while maintaining other methods.
2. Effective case teaching requires significant institutional investment. The Harvard Business School's success with CBL relied on dedicated case research and development teams, standardized protocols for case production, faculty development programs, and dissemination infrastructure (Nohria, 2021). Similar institutional support will be necessary for the DoD to implement CBL at scale. This includes investment in case development capacity, instructor training, and mechanisms for sharing cases across acquisition training programs.
3. Case design must match learning objectives and audience characteristics. Schroter and Rober (2022) demonstrated that different case types serve distinct pedagogical purposes. Short vignettes work best with closed, factual questions for conveying systematic knowledge. Medium-sized cases can address managing complexity and improving social competence. Full-length decision cases with extensive data and open questions develop



professional and methodological competencies. Defense acquisition case development should deliberately match case length, structure, and facilitation approach to intended learning outcomes and audience experience levels.

4. Innovative acquisition programs provide substantial material for case development. Programs that employ non-traditional acquisition approaches under EO 14265 can serve as ongoing sources of case material that captures innovative practices for broader workforce education. The CCAP interviews revealed decision-making dynamics that translate directly into teachable scenarios: speed under uncertainty, deep collaboration during dual competition, and joint decision-making across technical, contractual, and organizational boundaries. Each of these dynamics represents a distinct category of acquisition challenge that could support a standalone case study or be combined, as in the AutoNex case, to increase the ambiguity of the decision environment. A case focused solely on speed under uncertainty might center on a program's response to an emerging technical risk when schedule pressures constrain available options, targeting learning objectives around risk tolerance and stakeholder communication. A case on collaboration boundaries might examine how government personnel navigate information sharing when embedded with competing contractors, emphasizing judgment about fairness and oversight. A case on joint decision-making might explore the governance mechanisms that enable rapid pivots while maintaining accountability. This modularity suggests that a single innovative program can yield a portfolio of case studies useful for different learning objectives, audience experience levels, and time constraints.
5. Active programs present both opportunities and limitations for case development. Studying ongoing acquisition programs provides access to current practices and decision-making contexts but introduces limitations including evolving circumstances, unknown final outcomes, and



constraints on discussing sensitive information. The framework developed in this research addresses these challenges through focus on decision processes rather than outcomes, disguised case narratives, and careful protection of program and personnel identity.

B. IMPLICATIONS FOR ACQUISITION POLICY AND EDUCATION

EO 14265 positions case studies as a central instrument for documenting innovative acquisition approaches and developing the workforce needed to implement them (Executive Order No. 14265, 2025). This research suggests if the DoD utilized CBL as a core teaching technique, it could support innovation and learning simultaneously.

Executive Order 14265 emphasizes speed, flexibility, and innovation in defense acquisition while calling for workforce development that fosters improved decision-making and critical thinking (Executive Order No. 14265, 2025). CBL directly supports these objectives through several mechanisms:

1. **Building critical thinking capacity.** The executive order's emphasis on non-traditional acquisition approaches requires professionals who can adapt to evolving situations rather than simply follow established procedures. CBL develops exactly this adaptive capacity by exposing learners to unfamiliar scenarios requiring analysis, judgment, and action. Through cases, acquisition professionals build mental models and decision-making heuristics that transfer to new contexts they will encounter in their programs (Kaddoura, 2011; Kolb, 1984; Popil, 2011).
2. **Capturing and disseminating innovative practices.** Section 5(c) of EO 14265 specifically directs the establishment of field training teams to deliver case studies of successful approaches for implementing innovative acquisition authorities (Executive Order No. 14265, 2025). Cases developed from programs like CCAP, the Defense Innovation Unit, and other innovative efforts can capture the decision-making processes, governance structures, and problem-solving approaches that enabled their success. Unlike procedural guidance that prescribes what to do, cases



illustrate how decisions were made under real-world constraints and uncertainty (Franke, 2011; Nohria, 2021).

3. **Developing risk tolerance and judgment.** The executive order calls for incentivizing and rewarding risk-taking and innovation from acquisition personnel (Executive Order No. 14265, 2025). CBL provides a safe environment for professionals to practice taking risks and defending their decisions. Through repeated case analysis and discussion, learners develop confidence in their ability to make decisions under uncertainty and experience how different risk approaches lead to different outcomes.
4. **Bridging theory and practice.** Case-based learning bridges theoretical knowledge (regulations, policies, authorities) and practical application by requiring learners to apply theory to realistic scenarios. For example, the AutoNex case requires students to apply knowledge of contract types, technical review processes, and risk assessment principles to a specific decision situation where these elements intersect.

C. **RECOMMENDATIONS FOR DAU, FIELD TRAINING TEAMS, AND PME**

Based on the research findings, the following recommendations are offered for implementing CBL in defense acquisition education:

1. **Recommendations for DAU**

The literature review suggests that effective CBL requires dedicated infrastructure for case development, instructor training, and continuous case production (Schroter & Rober, 2022). Harvard Business School's success stemmed from establishing the Bureau of Business Research, which developed standardized protocols for case production and enabled rapid scaling of case materials (Lusoli, 2020). The DAU has previously developed case-based curriculum, particularly in its PMT 401 Program Manager Course, which was originally based on HBS case method and included 80 defense acquisition case studies written by DAU students and faculty (Gadeken & DeLeon, 2020). However, the DAU has deliberately reduced its reliance on case method, cutting case discussions while increasing



simulations and experiential exercises (Gadeken & DeLeon, 2020). The remaining case studies are separate reference resources that are linked to other organizations, such as the Defense Standardization Program, RAND reports, or NPS theses; others are organized by functional area, including the Technical Risk Case Studies database with over 175 indexed reports and lessons learned repositories within the engineering community (DAU, n.d.). These resources serve as reference materials where program managers and systems engineers can review “successes, failures, problems, and solutions of similar programs” to gain insights into risks and opportunities (DAU, n.d.). These resources serve more as case histories and differs from the HBS-style teaching cases in important aspects: the existing resources function as retrospective program narratives rather than prospective pedagogical instruments with structured decision points, deliberate ambiguity, and teaching notes designed for facilitated discussion. These findings inform the following recommendations:

1. **Scale existing case development capability.** The DAU should increase dedicated capacity for researching, writing, and maintaining acquisition case studies that meet pedagogical standards established in this research. The acquisition case studies developed for PMT 401 primarily serve executive-level residential programs (Gadeken & DeLeon, 2020). The DAU should expand this capability to produce cases accessible across certification levels by training personnel in case writing methodology, cultivating partnerships with innovative program offices for case material, and establishing protocols for case review and distribution.
2. **Extend instructor facilitation training beyond executive programs.** The DAU faculty teaching PMT 401 have developed expertise in case facilitation techniques. The DAU should transfer this knowledge to other instructors across other certification programs by developing a faculty development program that trains instructors in case facilitation techniques including Socratic questioning, managing group discussions, synthesizing student contributions, and guiding analysis without imposing predetermined conclusions.



3. **Integrate cases strategically within existing curricula.** Currently, CBL concentrates in executive-level courses while other certification levels rely on more heavily on online modules and traditional instruction. The DAU should identify specific learning objectives within existing courses where CBL offers advantages over lectures or other methods. Cases are particularly well-suited for developing judgment in ambiguous situations, integrating knowledge, and practicing decision-making under pressure.
4. **Create an accessible case library with teaching notes.** While the DAU maintains case materials for internal PMT 401 use, these resources are not available to the broader acquisition workforce or external instructors. The DAU should develop and maintain a publicly accessible library of acquisition case studies organized by topic, complexity level, and target audience. Each case should include comprehensive teaching notes that enable instructors to effectively facilitate the case with minimal additional preparation. The framework and teaching note structure developed in this research should serve as a template for standardizing these materials.

2. Recommendations for Field Training Teams

EO 14265 specifically directs field training teams to provide “templates and case studies of successful approaches for implementing innovative acquisition authorities” (Executive Order No. 14265, 2025, Sec. 5[c]). Interview findings from the CCAP revealed that innovative practices, such as joint TRBs, fire team structures, and transparent competition, are difficult to convey through policy guidance alone; practitioners may benefit from seeing how these approaches work in practice. The following recommendations address this gap:

1. **Use cases to demonstrate innovative acquisition approaches.** EO 14265 directs field training teams to incorporate case studies that illustrate successful implementation of non-traditional authorities such as Other Transaction Authorities, Middle Tier of Acquisition pathways, and Commercial Solutions Opening processes (Executive Order No. 14265,



2025). Cases provide concrete examples of how these authorities have been applied in actual programs.

2. **Develop mini-cases for focused training sessions.** Field training teams may operate under time constraints that preclude full-length case discussions. Shorter case formats, such as vignettes or mini-cases, can deliver targeted learning in condensed sessions while still engaging learners in active analysis and decision-making. As discussed in Chapter III, Schröter and Röber (2022) identify multiple case types ranging from brief scenarios to comprehensive case narratives, noting that shorter formats work best with closed factual questions led by the instructor, while medium-sized cases can incorporate open questions when students have experiences that supplement the limited case information.
3. **Capture lessons from field engagements for future case development.** Field training teams will interact directly with acquisition programs implementing innovative approaches. These engagements generate material that can inform future case development. Teams should document decision-making challenges, governance innovations, and problem-solving approaches encountered during their work.

3. Recommendations for PME

The literature implies acquisition professionals operate in environments characterized by uncertainty and complexity, and that cases provide a pedagogical foundation for decision-making under uncertainty by repeatedly exposing students to ambiguous situations requiring action (Franke, 2011). The AutoNex case demonstrated that real-world circumstances can be converted into decision scenarios that are used to develop competencies through experiential learning that mirrors real operational complexity. These insights support the following recommendations:

1. **Leverage existing Harvard Business Publishing (HBP) cases.** PME programs can use HBP cases to introduce case method fundamentals before transitioning to acquisition-specific materials. HBP maintains a



library of decision cases addressing leadership, strategy, negotiation, and organizational change that can supplement defense-specific case development. While these cases may require adaptation for acquisition audiences, such as integration of regulatory context and stakeholder dynamics unique to defense procurement, they provide a pedagogical framework that can accelerate CBL implementation.

2. **Incorporate acquisition decision cases into joint education.** PME institutions educating officers who will serve in acquisition leadership roles should include case studies that examine acquisition decision-making at strategic and operational levels. Cases that highlight the intersection of acquisition strategy, operational requirements, and resource constraints prepare leaders for the complexity they will encounter.
3. **Develop cases that integrate acquisition with warfighter perspectives.** Many acquisition challenges involve tension between acquisition processes and operational urgency. PME cases that include both acquisition professional and warfighter viewpoints can develop mutual understanding and collaborative problem-solving skills.
4. **Use cases to examine acquisition reform implementation.** EO 14265 represents a significant policy shift in defense acquisition. PME programs can use cases to examine how acquisition organizations implement reform directives, the challenges encountered, and the leadership actions that facilitate or impede change.

D. SUMMARY OF PROPOSED FRAMEWORK FOR CASE INTEGRATION

Acquisition training needs an implementation framework to govern how organizations can institutionalize case studies. As such, teams tasked with developing plans should consider approaches aligned with current acquisition reform, contracting competencies, and enterprise learning objectives. An integrated approach that leverages existing structures such as DAU, PME, Program Executive Offices (PEOs), and fielding teams should be a planning baseline, especially if those entities have been consistently



sustained within the acquisition community. As demonstrated in Chapter V, the student research team’s framework offers a scalable five-step approach that considers case selection, coordination, template use, distribution, and feedback. Strengths of this approach are that it combines existing platforms and doesn’t necessarily require significant resourcing (such as new platforms or significant additional manpower). The intended impact of this framework is to showcase how cases can be captured, placed in standardized formatting, and distributed, which can feed instructional learning loops within government organizations.

Service executives within defense acquisition play a key role in scaling and institutionalizing case-based instruction. To streamline implementable approaches, the student researcher team recommends standardizing guidance and using templates to improve consistency, comparability, and ease of use – which should drive information “push and pull cycles” required for case development. The sample case study in the appendix is a pilot of how case studies can reflect realistic scenarios that can be used for teaching. This study also included a reusable case template, teaching guide, and a tailorable discussion structure – which should be useful to senior governing officials, planners, and end-users (including facilitators, trainees, and supervising staff).

E. RESEARCH LIMITATIONS

While Chapter IV addressed the limitations associated with studying an active program, this chapter focuses on broader study limitations – including those related to scope, data, timing, and case integration. Each is described below.

1. **Scope:** The study was geared towards mid-level contracting practitioners within systems program offices (SPOs); however, the defense acquisition workforce includes far more than the contracting career field. Other functional experts serving on integrated project teams (IPTs) – such as financial managers, PMs, attorneys, logisticians, and engineers – operate within those same program offices. As a result, this study could have benefited from additional input regarding critical thinking and decision-making from an IPT standpoint.



2. **Data:** Due to time constraints and personnel availability, only a limited number of participants from the CCAP were able to take part in structured interviews. This presents a potential limitation as case studies typically rely on multiple information sources to achieve the depth required for teaching and training purposes. Additionally, security or classification boundaries can restrict access to program data, making it difficult to collect detailed information when working with sensitive or protected acquisition efforts.
3. **Timing:** This study is being done while defense acquisition is undergoing major acquisition reforms. Recommendations and plans may continue to evolve or shift, especially as the departments are submitting their plans in support of EO 14265.
4. **Implementation Framework:** No surveys or interviews were held with senior DoD officials or staffers at DAU. Likewise, this study does not explore their capacity or suitability for institutionalizing CBL.

F. AREAS FOR FUTURE RESEARCH

The defense acquisition enterprise is undergoing major reform. To date, the Joint Capabilities Integration Defense System (JCIDS) has been dissolved, acquisition regulations are being overhauled, and new “deal teams” and “portfolio acquisition executives” have been stood up to support defense modernization (Serbu, 2025). As a result, it will be incumbent for future research teams to analyze the impact of these changes not only upon the acquisition workforce, but also the defense industrial base. Below are three focus areas that will complement the work completed by this study:

1. Review service-level implementation plans and perform a cost benefit analysis of case-based training
2. Compare case-based instruction to traditional lecture-based acquisition training in terms of learner engagement, application of innovative



authorities (e.g., OTAs, CSOs), and impact on decision-making and critical thinking

3. Develop DoD-wide repository of validated acquisition case studies and teaching materials to build continuity and enterprise learning

G. PARTING THOUGHTS

The student research team hopes this study will contribute to the DoD's body of knowledge for defense acquisition education and case study research. To meet the urgent and rapid capability demands of operational environments, the DoD should consider the strategies, tools, and frameworks offered in this study. Leveraging the case method in defense acquisition is a sound approach that aligns with current reform talks, which seek to fill identifiable gaps in workforce development processes. The tools and strategies developed under this study are not only practical but are feasible for facilitation and implementation, which is important since the DoD is increasing emphasis upon speed (Serbu, 2025). Ultimately, this research supports the logic of using the case method as a benefit to the acquisition workforce.



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APPENDIX A. MINI CASE STUDY

AutoNex: Navigating Component Obsolescence in an Innovative Acquisition

On October 23, 2024, at 0745, U.S. Air Force Major Tessa Quinlor’s phone rang incessantly. The caller ID read “Elen Rhasic, Renvora Strategies.” Quinlor, the lead contracting officer for the AutoNex program at Lumina Air Force Base, had been expecting this call.

“Tessa, we have a problem,” Rhasic said. “Navorex just sent notification of their discontinuation of the INS-7700 navigation module, effective December 31st.”

Major Quinlor immediately began calculating the implications. The INS-7700 was the heart of Renvora’s avionics architecture for their unmanned aircraft prototype. First flight was scheduled in 137 days.

“How deep is it embedded?” Quinlor asked.

“Six major subsystems interface with it directly, and twelve indirectly,” Rhasic replied. “We’ve had the engineering team working on it all night. We’ve identified three potential paths forward, each with significant trade-offs affecting cost, schedule, and performance risk.”

Major Quinlor had two hours and fifteen minutes before the Technical Review Board meeting to understand the problem, assess options, and develop a recommendation that would affect the \$700 million contract, the competitive balance between two contractors, the program’s credibility with Congress, and potentially the Air Force’s future approach to streamlined acquisitions.

“Send me everything you have,” she said.

Background: The Autonex Program and Strategic Context

The AutoNex program represented a fundamental shift in defense acquisition. Launched in 2023 as part of a family of systems, AutoNex aimed to develop autonomous unmanned aircraft that would operate alongside manned aircraft at approximately half the cost.



China's rapid military modernization threatened U.S. air superiority for the first time since World War II. Traditional approaches—building small numbers of expensive manned aircraft—were economically unsustainable. The Air Force needed quantity and attritable mass with sufficient quality to be operationally relevant. AutoNex's concept called for these unmanned aircraft to extend sensor reach, carry additional weapons, and conduct high-risk missions.

The Air Force planned to procure 100–150 aircraft in the first increment, with target unit costs of \$25-30 million per aircraft and potential for up to 2,500 total across all increments. Initial operational capability was targeted for 2030.

An Innovative Acquisition Approach

AutoNex rejected traditional defense acquisition strategy from inception. In January 2024, the program office selected five contractors for initial concept development. Three months later, in April 2024, they down-selected to two contractors—Renvora and Stravelis Systems—for parallel Technology Maturation and Risk Reduction (TMRR) efforts. Each company would build and fly prototype aircraft, then compete for the production contract projected for FY2026.

The speed was unprecedented. From program launch to prototype flight in less than two years represented a substantial departure from defense acquisition norms, where similar programs typically took five to seven years. As U.S. Air Force Colonel Cael Benvor, the AutoNex program manager, briefed to the Senate Armed Services Committee in September 2024: “We’re deliberately applying ‘speed to ramp.’ The threat timeline demands operational capability by the end of the decade.”

The program's innovative acquisition approach incorporated several distinctive features:

Attributes-based requirements. Instead of detailed specifications, AutoNex used flexible attributes—such as range and teaming behaviors—to enable vendors to innovate and the government to pivot as technology and threat assessments evolved.



Joint Technical Review Board. Technical changes prompted a joint TRB process where government and contractor personnel reviewed structured packages with cost, schedule, and performance impacts before making integrated decisions.

Digital integration. The government had full access to contractor development systems and tools, which served as the configuration-controlled “source of truth” for TRBs, test observations, and design decisions.

Fire teams. Cross-functional government Integrated Product Teams aligned engineering, contracting, program management, and test to prevent fragmented discussions and give each vendor a single point of contact for decisions.

But the strategy created unique tensions. How collaborative should the government be with contractors who would later compete? How much information should contractors share when their insights might become differentiators in the competition? When one contractor encountered problems, should the government help solve them or let the competitive repercussions play out?

Major Tessa Quinlor: Balancing Collaboration and Competition

Major Quinlor had been selected as the lead contracting officer for AutoNex specifically because she understood these tensions. At 34, she had compiled an impressive resume. After graduating from the University of Miami with degrees in systems engineering and economics, she served as a developmental engineer on the F-XD program before earning her master’s in operations research from Northeastern University. She had deployed twice to Southwest Asia, giving her firsthand experience with how acquisition decisions manifested in combat operations.

What set Major Quinlor apart was her ability to navigate inherent contradictions in defense acquisition. She had seen programs fail because government oversight was too rigid and stifled contractor innovation. She had also seen programs fail because oversight was too permissive, allowing contractors to take technical risks that were operationally irrelevant.

On AutoNex, Major Quinlor had worked to establish “transparent competition” within the program office. Government engineers worked closely with their counterparts, participating in contractor design reviews and technical discussions. The program office



shared threat scenarios and operational concepts with both contractors. Major Quinlor held monthly “lessons learned” sessions where both contractors presented challenges they had overcome and shared solutions that advanced program performance.

The approach was working. In eighteen months since the Preliminary Design Review, neither contractor had missed a major milestone. Cost and schedule confidence was high. There was genuine trust between the government and contractors. But now their relationship faced its biggest test.

The Contractors: Renvora Strategies and Stravelis Systems

Renvora was a small defense contractor that had built its reputation on tactical drones and unmanned systems. Since its founding in 2008, it had grown from 200 to over 3,500 employees by capitalizing on military demand during the wars in Iraq and Afghanistan. The company’s TriStar long-range drone had become the Army’s preferred counter-IED platform.

But AutoNex presented a significant leap for Renvora. They had never integrated advanced electronic warfare systems and never developed autonomous AI for air combat. To be competitive, they hired former aerodynamicists from Wryndale, autonomous systems researchers from MIT, and electronic warfare experts from Rethyxis. They partnered with Zandryll for propulsion and Sylvenno g for radar systems.

Elen Rhasic, Renvora’s AutoNex program manager, was a former Air Force pilot and test engineer who served for twenty years. He understood military culture, spoke the government’s language, and had personal relationships with many of the AutoNex program team members. His approach was collaborative and transparent.

Stravelis Systems was everything Renvora was not. They were a legacy contractor with annual revenue exceeding \$25 billion and had designed and built combat aircraft for seventy years. Their F-Star fighter had been the Air Force’s air superiority platform for three decades. They employed 40,000, operated the most advanced production facilities in the industry, and maintained deep supply chain relationships in aerospace.

AutoNex was both an opportunity and a threat for Stravelis. Opportunity because they could leverage extensive capabilities and integrate AutoNex into existing fighter



production lines. Threat because the program's emphasis on affordability challenged their traditional approach of premium engineering and risk-averse processes.

Stravelis's AutoNex design was technically conservative but mature. They used proven subsystems, existing interfaces, and flight-tested components wherever possible. Their schedule was tight but had contingency reserves and a depth of resources.

The Crisis: October 23, 2024

Initial Assessment

Major Quinlor arrived at her office and immediately pulled up the engineering assessment Renvora had worked on overnight. The INS-7700 navigation module was a system combining GPS, inertial measurement, and tactical navigation algorithms. It was selected eighteen months earlier during preliminary design because it was flight-qualified on multiple military platforms and moderately priced at \$75,000 per unit. The manufacturer, Navorex Industries, had decided to discontinue the INS-7700 in favor of their next-generation INS-9000. For customers currently using the INS-7700, Navorex offered a six-month window for "last time buy" orders before ending production.

Renvora's overnight assessment identified twenty-six interfaces between the INS-7700 and other aircraft subsystems. Six were major: flight control, mission computer, electronic warfare, communications, weapons management, and vehicle management. Twelve were moderate and eight were minor. Changing the component would affect almost every system on the aircraft.

The Technical Review Board

Dr. Arlen Vorell, the government's lead systems engineer, convened the Technical Review Board meeting. Present were Major Quinlor, U.S. Air Force Lieutenant Colonel Liane Stravel (Deputy Program Manager), the engineers assigned to the Renvora team, and via secure video, Elen Rhasic and his chief engineer. Rhasic walked through the problem, the timeline of discovery, and the technical implications. Then he presented three options his team had developed.

Option 1 – Last-Time Buy: Purchase sufficient INS-7700 units to complete all seven-prototype aircraft plus spares.



Cost: \$850,000 (\$450,000 more than current budget)

Schedule Impact: None

Technical Risk: Low for prototypes, high for production

Production Implications: Production aircraft would require redesign

Option 2 – Redesign with Alternative Component: Switch to NavCore NS-4400, currently available with similar performance.

Cost: \$2.1M for redesign, qualification testing, and integration

Schedule Impact: 6–8 week delay for first flight

Technical Risk: Moderate (proven component but interfaces must be validated)

Production Implications: NS-4400 shows early market signals of being superseded in 3–5 years

Option 3 – Complete Redesign with Next-Generation Technology: Incorporate Navorex’s new INS-9000 series.

Cost: \$4.5M for redesign, new interfaces, and testing

Schedule Impact: 4–5 months delay to first flight

Technical Risk: High (new technology with limited flight heritage)

Production Implications: Robust long-term solution; enhanced capabilities could be differentiator in competition

As Rhasic finished his presentation, Dr. Vorell said, “Walk me through the production implications in more detail. How does each option affect what you’ll propose in eighteen months when we compete the production contract?”

Rhasic responded: “Option 1 gets us through prototypes, but there will be a problem in production. We’d include in our production proposal that we’re switching components. That adds cost, risk, and extends production schedule.”

“Option 2 is better for production, but we will be betting that the NS-4400 lasts long enough. If it gets discontinued two years into production, we’re right back here.”

“Option 3 is the most intensive because it requires us to significantly modify our operational design. The INS-9000 has enhanced capabilities like better accuracy and faster processing. If we implement it, we could offer capabilities in our production proposal we hadn’t originally planned. That could be expensive overengineering or a competitive advantage.”



The Complications

As the Technical Review Board continued, Major Quinlor recognized that this decision involved more than selecting a navigation component. Overlapping complications created a complex decision space.

The Schedule Imperative

The March 2025 first flight date had been briefed to the Secretary of the Air Force, the Chief of Staff, the House Armed Services Committee, and the Senate Appropriations Committee. Colonel Benvor had testified before Congress six weeks earlier, emphasizing that AutoNex was on track and would demonstrate rapid development timelines. The credibility of the acquisition approach depended on meeting that commitment. AutoNex would be scrutinized by skeptics of rapid defense acquisition, critics of unmanned combat aircraft, and adversaries who wanted the program to fail.

Major Quinlor also knew the danger of schedule-driven decision-making. The F-XD program had made schedule commitments it couldn't meet, then made technical compromises to hit milestones, creating downstream problems that cost billions to fix. The right technical decision mattered more than meeting milestones.

Competitive Dynamics

Any decision made would affect the competition between Renvora and Stravelis. If Renvora chose Option 1 and shifted the problem to production, Stravelis could have a life cycle management advantage. If Renvora chose Option 3 and delivered enhanced capabilities, Stravelis would be forced to upgrade their design to remain competitive.

Also, the government's response would signal how collaborative the program office would be when contractors encountered difficulties. If the government helped Renvora solve the problem, Stravelis would expect similar assistance. If the government forced Renvora to face the full consequences, Stravelis would become risk-averse in their development.

Contract Negotiation Status

Renvora's Increment 2 proposal was \$18.7 million. The government countered at \$16.3 million. Normal give-and-take would eventually settle around \$17-17.5 million. The component issue potentially adds \$850K to \$4.5M in costs.



Lieutenant Colonel Stravel requested clarification: “Let me make sure I understand the contract situation. We’re currently negotiating the modification for Increment 2 of the TMRR contract. You submitted your proposal three weeks ago. We sent our first counter one week ago. This component issue emerged before negotiations concluded.”

“That’s correct,” Rhasic confirmed.

“So technically, the work involving this component isn’t under contract yet,” Stravel continued. “Which means we have flexibility in how we handle this, but it also means we must be careful what we agree to and how it affects the negotiation.”

The Collaborative Standard

From the beginning of the program, Colonel Benvor had insisted on collaborative problem-solving. His three principles were posted throughout the office: “No surprises. Transparent communication. Solve problems together.” All functions embodied that approach and worked side-by-side with their contractor counterparts.

But this situation tested the limits of collaboration. If the government told Renvora which option to choose, was it assuming design responsibility? If the government didn’t provide clear direction, was it relinquishing oversight?

The Federal Acquisition Regulation provided limited guidance. FAR 15.402 addresses cost analysis. FAR Part 46.202 covers quality assurance. But none directly addressed how collaborative the government should be with a contractor facing a technical decision that would affect current contract performance and future competitive position.

The Decision

After almost an hour of the Technical Review Board discussing the issues, Dr. Vorell turned to Major Quinlor. “Tess, you’re the contracting officer. What’s your recommendation?”

Throughout the course of the meeting, Major Quinlor had noted the technical arguments, contract implications, stakeholder perspectives, and competition implications. She faced three decisions:

Decision 1: Which technical option? Option 1 preserved schedule but created production risk. Option 2 balanced factors but didn’t fully solve the problem. Option 3 had significant cost and schedule impact but offered long-term benefits.



Decision 2: How to decide? Should this be a joint government-contractor decision, leveraging the collaborative approach that had worked well throughout the program? Should it be a government decision, exercising appropriate oversight and protecting competitive fairness? Or should it be primarily a contractor decision, with government review and approval?

Decision 3: How to structure the agreement? How should the government handle the cost increase and schedule impact in the ongoing negotiation? Should there be cost-sharing? Should Renvora bear consequences for not anticipating obsolescence risk?

Everyone was watching Major Quinlor. She thought about the principles Colonel Benvor had established: collaborate, communicate, solve problems together. But she also thought about her responsibility as a contracting officer: get best value for the government, ensure fair competition, and maintain appropriate safeguards.

The AutoNex program office had worked so hard to build trust, maintain competition, and streamline capability delivery. Whatever recommendation she made would set precedent for how future problems would be handled. It would signal to both contractors what collaboration truly entails. It would demonstrate whether the program's cultural principles could withstand real stress.

Major Quinlor looked at Dr. Vorell. "Before I give my recommendation, I want to make sure we're considering the full range of second-order effects. Let me walk through how I'm thinking about this decision..."



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APPENDIX B. AUTONEX DISCUSSION QUESTIONS

Discussion Questions

1. Which option should Major Quinlor recommend, and why? What factors should receive the most weight in this decision?
2. How collaborative should the government be in this situation? Should this decision be made jointly with Renvora, by the government independently, or through some hybrid approach?
3. What are the appropriate boundaries between government and contractor in a “transparent competition” acquisition strategy? How should those boundaries shift depending on circumstances?
4. How will this decision affect Stravelis, future contractor behavior, program credibility, and the AutoNex acquisition approach overall?



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APPENDIX C. AUTONEX TEACHING NOTE

Synopsis

This case examines a critical decision point in an innovative defense acquisition program where a contractor discovers component obsolescence during active contract negotiations. Major Tessa Quinlor, the lead contracting officer for the AutoNex program, must recommend one of three technical options to address the obsolescence of a navigation module critical to Renvora's aircraft architecture. Each option presents distinct implications for cost, schedule, technical risk, and competitive fairness. The case explores tensions between collaboration and competition, the challenge of maintaining schedule commitments while ensuring sound technical decisions, and the appropriate boundaries between government oversight and contractor autonomy in innovative acquisition programs. The decision will establish precedent for how future problems are handled and signal to both contractors what "transparent competition" truly means under stress.

Intended Audience

Primary audience: Mid-career acquisition professionals (GS-12 equivalent or above) with foundational knowledge of acquisition processes, including contracting officers, program managers, and systems engineers.

Secondary audience: Students in graduate courses on defense acquisition, program management, contracting, or organizational decision-making, when provided appropriate background readings on defense acquisition fundamentals.

Note: Instructors may emphasize different elements depending on audience: contract structure and negotiation dynamics for contracting professionals; governance and risk management for program managers; trade-off analysis and systems integration for engineers.

Purpose

The goal of this case study is to provide learners with a realistic opportunity to practice decision-making under uncertainty in an innovative acquisition environment. Participants will analyze trade-offs across multiple dimensions, consider stakeholder perspectives that may conflict, and develop defensible recommendations that balance



program objectives with regulatory and ethical constraints. The case is designed to develop judgment rather than teach specific rules—preparing acquisition professionals to navigate novel situations where existing guidance provides frameworks but not solutions.

Learning Objectives

1. Analyze trade-offs in defense acquisition decisions involving cost, schedule, and technical risk.
2. Evaluate appropriate boundaries for government-contractor collaboration in competitive programs.
3. Assess second-order effects and precedent-setting implications of acquisition decisions.
4. Develop judgment about when to be prescriptive versus collaborative in government oversight.

Suggested Pre-Reading and Assignment Questions

Options for Recommended Readings

- Stakeholder Mapping:
 - Bryson, J. M. (2004). What to do when stakeholders matter: Stakeholder identification and analysis techniques. *Public Management Review*, 6(1), 21–53. <https://doi.org/10.1080/14719030410001675722>
- Trade-off Matrices:
 - Belton, V. and Stewart, T.J. (2002) *Multiple Criteria Decision Analysis: An Integrated Approach*. Springer-Science + Business Media, B.V., Berlin, Heidelberg.
 - Keeney, R. L. (1996). Value-focused thinking: Identifying decision opportunities and creating alternatives. *European Journal of Operational Research*, 92(3), 537–549.
 - Keeney, R. L., & Raiffa, H. (1993). *Decisions with multiple objectives: Preferences and value tradeoffs*. Cambridge University Press.
- Second-order Effects Analysis (Systems Thinking):



- Kurtz, C. F., & Snowden, D. J. (2003). The new dynamics of strategy: Sense-making in a complex and complicated world. *IBM Systems Journal*, 42(3), 462–483.
- Meadows, D. H. (2008). *Thinking in systems: A primer*. Earthscan.
- Sterman, J. D. (2000). *Business dynamics: Systems thinking and modeling for a complex world*. Irwin McGraw-Hill.
- Background reading on decision-making under uncertainty in complex organizations:
 - Keeney, R. L. (1994). Creativity in decision making with value-focused thinking. *Sloan Management Review*, 35(4), 33–41.
 - Klein, G. (1998). *Sources of power: How people make decisions*. MIT Press
 - Klein, G. A. (1993). A recognition-primed decision (RPD) model of rapid decision making. In G. A. Klein, J. Orasanu, R. Calderwood, & C. E. Zsombok (Eds.), *Decision making in action: Models and methods* (pp. 138–147). Ablex.

Note: For training environments where pre-reading is unrealistic, the instructor should set up the discussion by providing a brief overview (10-15 minutes) of the strategic context and key concepts before distributing the case. This ensures all participants have sufficient background to engage meaningfully with the decision scenario.

Assignment Questions

The following questions should be provided to students in advance or at the start of the session. Instructors should select questions based on where they want the discussion to focus. For a 90-minute session, 2–3 questions are typically sufficient.

1. Which option should Major Quinlor recommend, and why? What factors should receive the most weight in this decision?
2. How collaborative should the government be in this situation? Should this decision be made jointly with Renvora, by the government independently, or through some hybrid approach?



3. What are the appropriate boundaries between government and contractor in a “transparent competition” acquisition strategy? How should those boundaries shift depending on circumstances?
4. How will this decision affect Stravelis, future contractor behavior, program credibility, and the AutoNex acquisition approach overall?

Theoretical and Analytical Frameworks

The case is designed to invoke several theoretical lenses that instructors may reference during discussion:

Experiential learning (Kolb). Students move through concrete experience (engaging with the case), reflective observation (analyzing what happened), abstract conceptualization (extracting principles), and active experimentation (developing recommendations).

Decision case analysis (Ellet). The case satisfies Ellet’s criteria: clear decision-maker (Major Quinlor), significant problem (component obsolescence with major program implications), defined options (three technical paths), and constraint recognition (schedule, budget, competition, regulations).

Sense-making under uncertainty (Franke). Students must act without full information, practice pattern recognition, and reflect on the quality of their reasoning—developing judgment in ambiguous situations characteristic of innovative defense acquisitions.

Practical Analytical Tools

Instructors may introduce the following practical tools to help students structure their analysis:

- Trade-off matrix: Evaluate options across dimensions: cost, schedule, technical risk, production implications, competitive effects, and precedent-setting consequences. Students should develop their own weighting of factors and defend their choices.
- Stakeholder mapping: Identify interests and perspectives of the government program office, Renvora, Stravelis, Congress, operational commands, and the



broader defense acquisition community. Each stakeholder has legitimate interests that may conflict with others.

- Second-order effects analysis: Consider implications beyond the immediate decision: effects on contractor behavior, program culture, future acquisition approaches, and relationships with oversight bodies.

Teaching Plan

The following plan is designed for a 90-minute session with 16–25 participants. Depending on the audience and learning objectives, educators may adjust timeframes or emphasis. For shorter sessions (60-75 minutes), the group presentation phase can be abbreviated or eliminated. For larger groups, additional time may be needed for group presentations

Group Discussion (20 Minutes)

After the instructor recaps the case and assignment questions, students work in small groups (4-5 people) to identify the problem, evaluate options, and prepare a recommendation.

Prompts for group work:

- What is the core problem Major Quinlor must solve?
- What factors should weigh most heavily in this decision?
- What recommendation will your group defend?
- What risks do you acknowledge with your recommendation?

Group Presentations (20 Minutes)

Selected groups present their analyses and recommendations to the full class. Each group should state:

- Their recommended option (1, 2, or 3)
- Primary justification for the recommendation
- Key risks they acknowledge

Limit presentations to 3–4 minutes each. Aim for 4–5 group presentations to ensure diversity of perspectives.

Instructor Comments and Board Work (15 minutes).



During or immediately after group presentations, the instructor uses a board plan to organize arguments and manage time.

Suggested Board Plan:

Dimension	Option 1	Option 2	Option 3
Cost			
Schedule			
Technical Risk			
Competitive Effects			
Precedent Set			

Record key points from each group presentation. Use the board to highlight areas of agreement and disagreement, and to identify arguments that warrant deeper exploration in the case discussion phase.

Case Discussion and Analysis (25 Minutes)

The instructor facilitates a whole-class discussion focused on answering the assignment questions. Suggested sequence:

1. **Descriptive (5 minutes):** “What are the key facts? What does Major Quinlor know and not know?”
2. **Diagnostic (10 minutes):** “Why is this decision difficult? What tensions or trade-offs make this more than a straightforward technical choice?”
3. **Assessment (10 minutes):** “What should Major Quinlor recommend? How should she structure the decision process and agreement?”

Sample Analysis for Each Option:

Option 1 (Last-Time Buy) — Arguments for: Preserves schedule commitment; lowest immediate cost; maintains program credibility with Congress; defers production decision to later when more information is available. Arguments against: Shifts problem to production; creates known technical debt; may disadvantage Renvora in production competition.



Option 2 (Alternative Component) — Arguments for: Balances schedule and technical risk; moderate cost; addresses immediate obsolescence. Arguments against: May repeat obsolescence problem in production; 6–8 week delay affects schedule commitment; doesn’t provide competitive differentiation.

Option 3 (Next-Generation Technology) — Arguments for: Long-term solution; enhanced capabilities could be competitive advantage; aligns with program’s innovative approach. Arguments against: Highest cost and schedule impact; introduces new technical risk; requires explaining 4–5 month delay to Congress.

Summary (10 minutes)

The instructor synthesizes the discussion and ties it back to foundational documents, directives, and implications for DoD or the unit.

Key Take-Away Messages

- **Innovative acquisition requires judgment when problems arise, not just at program design.** The structures that enable speed (joint TRBs, fire teams, digital integration) also create decision points where professionals must exercise discretion.
- **Collaboration boundaries must be actively managed, especially under stress.** “Transparent competition” works when interests align; acquisition professionals need frameworks for when they diverge.
- Precedent-setting decisions warrant explicit consideration of second-order effects. How this decision is made matters as much as what is decided.
- Schedule pressure is real but should not override sound technical and business judgment. The F-XD example in the case illustrates the cost of schedule-driven compromises.

Connection to Executive Order 14265

Executive Order 14265 emphasizes “accelerating the delivery of warfighting capabilities” while “incentivizing and rewarding risk-taking and innovation.” This case illustrates the tension acquisition professionals face when implementing these priorities: speed matters, but so does sound judgment. The EO’s call for “templates and case studies



of successful approaches” recognizes that workforce development requires practice with realistic dilemmas, not just knowledge of rules.

Implications for Units: Program offices implementing innovative acquisition strategies should establish clear decision frameworks before crises emerge. The “no surprises, transparent communication, solve problems together” principles work well as cultural values; they need operational translation when interests conflict or precedent is at stake.



APPENDIX D. INSTRUCTIONS AND TEMPLATE FOR DISCUSSION QUESTIONS

Discussion questions appear at the end of the case narrative and guide student analysis. Kenneth Andrews (1951) defined a case as “a carefully written description of an actual situation in business which provokes in the reader the need to decide what is going on, what the situation really is or what the problems are, and what can and should be done” (p. 60). Effective questions support this goal by requiring analysis rather than simple recall, and by connecting to specific learning objectives. Include 3–5 questions for a typical case.

Purpose of Discussion Questions

Discussion questions serve three functions:

1. Focus attention on the key issues the case is designed to explore
2. Structure analysis by guiding students through the decision-making process
3. Enable assessment by providing observable criteria for evaluating student reasoning

Characteristics of Effective Questions

- **Open-ended:** Cannot be answered with yes/no or a single fact
- **Decision-focused:** Require students to take a position and defend it
- **Multi-dimensional:** Invite consideration of multiple stakeholder perspectives
- **Connected to learning objectives:** Each question maps to specific capabilities being developed
- **Appropriately ambiguous:** No single “correct” answer, but some answers are better reasoned than others

Question Types, Case Length, and Discussion Phases

Schröter, E., & Röber (2022) identify that case length should determine question structure. Short vignettes work best with closed, factual questions led by the instructor, as



limited information doesn't support independent deliberation. Medium-sized cases can use closed questions to draw attention to theoretical concepts or open questions when students share professional backgrounds. Full-length case studies with extensive data work best with open questions that force students to orient themselves, process information, and develop independent problem analyses (pp. 266–267).

Effective case discussions typically progress through three phases. Design questions that support this progression:

Phase	Purpose	Example Stems
Descriptive	Establish facts and context; ensure shared understanding	“What are the key facts?” “What does [protagonist] know and not know?”
Diagnostic	Analyze causes, tensions, and trade-offs	“Why is this decision difficult?” “What tensions or trade-offs exist?”
Assessment	Develop and defend recommendations	“What should [protagonist] do?” “How should the decision process be structured?”

Discussion Question Template

Replace the examples below with questions specific to your case. Aim for 3–5 questions total. For a 90-minute session, 2–3 questions are typically sufficient.

1. *[Primary decision question]*: Which option should [protagonist] recommend, and why? What factors should receive the most weight in this decision?
2. *[Process/governance question]*: How collaborative should the government be in this situation? Should this decision be made jointly, by the government independently, or through a hybrid approach?
3. *[Boundaries/principles question]*: What are the appropriate boundaries between government and contractor in this acquisition strategy? How should those boundaries shift depending on circumstances?



4. *[Second-order effects question]*: How will this decision affect [stakeholders], future contractor behavior, program credibility, and the acquisition approach overall?



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APPENDIX E. TEACHING NOTE TEMPLATE

The teaching note is a confidential document for instructors that provides guidance on facilitating the case discussion. It should never be distributed to students. A comprehensive teaching note enables instructors unfamiliar with the specific subject matter to effectively facilitate the case. The structure follows Harvard Business School conventions adapted for defense acquisition contexts.

Synopsis

Provide an approximately 150–250-word summary of the case that captures: (1) the central decision or dilemma, (2) the protagonist and their role, (3) the key tensions or trade-offs, and (4) why this case matters for acquisition professionals. The synopsis helps instructors quickly assess whether the case fits their learning objectives.

[Write your synopsis here. Example: This case examines a critical decision point in [program type] where [protagonist role] must [describe core decision]. The case explores tensions between [tension 1] and [tension 2], the challenge of [key challenge], and the appropriate boundaries between [relevant parties]. The decision will establish precedent for [broader implications].]

Intended Audience

Specify primary and secondary audiences. Include grade level, experience requirements, and prerequisite knowledge. Note how instructors might adjust emphasis for different audiences (e.g., contract structure for contracting professionals; governance and risk for program managers; technical trade-offs for engineers).

Primary audience: *[e.g., Mid-career acquisition professionals (GS-12 equivalent or above) with foundational knowledge of acquisition processes, including contracting officers, program managers, and systems engineers.]*

Secondary audience: *[e.g., Graduate students in defense acquisition, program management, contracting, or organizational decision-making courses, when provided appropriate background readings on defense acquisition fundamentals.]*

Instructor note: *[Describe how to adjust emphasis for different audiences.]*

Purpose



Articulate the overarching goal of the case. Focus on capability development rather than content transmission. Dean Donham (1922) emphasized that the case method develops “command over new concrete situations” rather than transmitting facts quickly. Connect to the meta-skills Nohria (2021) identified: preparation, discernment, bias recognition, judgment, collaboration, curiosity, and self-confidence.

[Write your purpose statement here. Example: The goal of this case study is to provide learners with a realistic opportunity to practice decision-making under uncertainty in an innovative acquisition environment. Participants will analyze trade-offs across multiple dimensions, consider stakeholder perspectives that may conflict, and develop defensible recommendations that balance program objectives with regulatory and ethical constraints. The case is designed to develop judgment rather than teach specific rules—preparing acquisition professionals to navigate novel situations where existing guidance provides frameworks but not solutions.]

Learning Objectives

List 3–5 specific, measurable learning objectives. Use action verbs (analyze, evaluate, assess, develop, apply). Align with DoD Contracting Competency Model or relevant workforce framework where applicable.

Upon completing this case, participants will be able to:

1. [Learning objective 1, e.g., Analyze trade-offs in defense acquisition decisions involving cost, schedule, and technical risk.]
2. [Learning objective 2, e.g., Evaluate appropriate boundaries for government-contractor collaboration in competitive programs.]
3. [Learning objective 3, e.g., Assess second-order effects and precedent-setting implications of acquisition decisions.]
4. [Learning objective 4, e.g., Develop judgment about when to be prescriptive versus collaborative in government oversight.]

Applicable Dilemmas and Lessons

Identify 3–5 dilemmas that acquisition professionals may face in innovative programs. These dilemmas should connect to the competencies emphasized in the literature



(judgment, framing, reflection) and policy objectives. Frame each as a tension between competing values or priorities.

1. **Collaboration vs. competition.** [e.g., Helping one contractor solve a problem may be in the program's best interest, but could provide an advantage over another vendor. The case illustrates how acquisition professionals must balance program optimization with fairness principles.]
2. **Schedule vs. technical integrity.** [e.g., The case forces a choice between preserving schedule commitments and pursuing technically superior solutions.]
3. **Short-term fixes vs. long-term precedent.** [e.g., One option solves the immediate problem but creates downstream issues; another creates short-term costs but positions the program better long-term.]
4. **Oversight vs. empowerment.** [e.g., The program's collaborative emphasis creates expectations the government will help solve problems, but the acquisition team must also protect government interests.]

Suggested Pre-Reading and Assignment Questions

Identify 2–4 readings that provide conceptual frameworks students will apply during case analysis. Organize by topic area.

Recommended Readings:

- *[Topic area 1, e.g., Stakeholder Analysis]: [Citation]*
- *[Topic area 2, e.g., Decision-Making Under Uncertainty]: [Citation]*
- *[Topic area 3, e.g., Trade-off Analysis]: [Citation]*

Note: For training environments where pre-reading is unrealistic, the instructor should set up the discussion by providing a brief overview (10-15 minutes) of the strategic context and key concepts before distributing the case. This ensures all participants have sufficient background to engage meaningfully with the decision scenario.

Assignment Questions



The following questions should be provided to students in advance or at the start of the session. Instructors should select questions based on where they want the discussion to focus. For a 90-minute session, 2–3 questions are typically sufficient.

[Copy your discussion questions here. These are the same questions that appear at the end of the case narrative.]

Topics for Student Debate

To deepen engagement and encourage students to articulate and defend contrasting positions, develop 2–3 debate prompts that can be used for in-class debates or written reflections. Frame as provocative statements students must argue for or against.

1. [Debate topic 1, e.g., “In rapid prototyping programs, schedule should rarely be sacrificed for technical perfection.”]
2. [Debate topic 2, e.g., “In transparent competition strategies, the government should prioritize collaborative problem-solving over strict oversight.”]
3. [Debate topic 3, e.g., “Contractors should bear primary responsibility for managing component obsolescence in innovative programs.”]

Theoretical and Analytical Frameworks

Describe the theoretical lenses the case is designed to invoke and the practical analytical tools students may use. This helps instructors connect case discussion to broader conceptual foundations.

Theoretical Lenses:

- **Experiential learning (Kolb, 1984):** Students move through concrete experience (engaging with the case), reflective observation (analyzing what happened), abstract conceptualization (extracting principles), and active experimentation (developing recommendations).
- **Decision case analysis (Ellet, 2018):** The case satisfies Ellet’s criteria: clear decision-maker, significant problem, defined options, and constraint recognition.



- **Sense-making under uncertainty (Franke, 2011):** Students must act without full information, practice pattern recognition, and reflect on the quality of their reasoning—developing judgment in ambiguous situations characteristic of innovative defense acquisition.

Practical Analytical Tools:

- **Trade-off matrix:** *[Identify dimensions for evaluation, e.g., cost, schedule, technical risk, production implications, competitive effects, precedent-setting consequences.]*
- **Stakeholder mapping:** *[List key stakeholders whose perspectives students should consider, e.g., government program office, contractors, Congress, operational commands, defense acquisition community.]*
- **Second-order effects analysis:** *[Identify implications beyond the immediate decision, e.g., effects on contractor behavior, program culture, future acquisition approaches.]*

Teaching Plan

The following plan is designed for a 90-minute session with 16–25 participants. Depending on the audience and learning objectives, educators may adjust timeframes or emphasis. For shorter sessions (60-75 minutes), the group presentation phase can be abbreviated or eliminated. For larger groups, additional time may be needed for group presentations.

Group Discussion (20 minutes)

After the instructor recaps the case and assignment questions, students work in small groups (4-5 people) to identify the problem, evaluate options, and prepare a recommendation.

Prompts for group work:

- What is the core problem [protagonist] must solve?
- What factors should weigh most heavily in this decision?
- What recommendation will your group defend?
- What risks do you acknowledge with your recommendation?

Group Presentations (20 minutes)



Selected groups present their analyses and recommendations to the full class. Each group should state:

- Their recommended option
- Primary justification for the recommendation
- Key risks they acknowledge

Limit presentations to 3–4 minutes each. Aim for 4–5 group presentations to ensure diversity of perspectives.

Instructor Comments and Board Work (15 minutes)

During or immediately after group presentations, the instructor uses a board plan to organize arguments and manage time.

Suggested Board Plan:

[Create a matrix with options as columns and evaluation dimensions as rows. Example dimensions: Cost, Schedule, Technical Risk, Competitive Effects, Precedent Set.]

Record key points from each group presentation. Use the board to highlight areas of agreement and disagreement, and to identify arguments that warrant deeper exploration in the case discussion phase.

Case Discussion and Analysis (25 minutes)

The instructor facilitates a whole-class discussion focused on answering the assignment questions. Use the three-phase sequence:

1. **Descriptive (5 minutes):** “What are the key facts? What does [protagonist] know and not know?”
2. **Diagnostic (10 minutes):** “Why is this decision difficult? What tensions or trade-offs make this more than a straightforward choice?”
3. **Assessment (10 minutes):** “What should [protagonist] recommend? How should [he/she] structure the decision process and agreement?”

Sample Analysis for Each Option:

[For each option in your case, provide: (1) Arguments for, (2) Arguments against. This helps instructors anticipate student responses and guide discussion toward key insights.]



Summary (10 minutes)

The instructor synthesizes the discussion and ties it back to foundational documents, directives, and implications for the DoD or the unit.

Key Take-Away Messages:

[List 3–5 key messages that emerge from the case discussion. These should connect specific case insights to broader principles applicable across acquisition contexts.]

- *[Key message 1, e.g., Innovative acquisition requires judgment when problems arise, not just at program design.]*
- *[Key message 2, e.g., Collaboration boundaries must be actively managed, especially under stress.]*
- *[Key message 3, e.g., Precedent-setting decisions warrant explicit consideration of second-order effects.]*
- *[Key message 4, e.g., Schedule pressure is real but should not override sound technical and business judgment.]*

Implications for Units:

[Provide practical guidance for how organizations might apply insights from this case. What frameworks, processes, or cultural elements should units consider establishing?]



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APPENDIX F. QUALITY CHECKLIST

Use this checklist to evaluate your discussion questions and teaching note before finalizing. The checklist incorporates criteria from Merriam (1998): particularistic (focuses on a specific situation), descriptive (provides rich detail), and heuristic (helps readers gain better understanding).

Discussion Questions:

- Each question is open-ended and cannot be answered with yes/no
- Questions require analysis and position-taking, not just recall
- Questions map to specific learning objectives
- Questions support progression from descriptive to diagnostic to assessment
- 3-5 questions total (appropriate for session length)

Teaching Note:

- Synopsis clearly conveys the core decision and why it matters
- Audience is clearly specified with guidance for adaptation
- Learning objectives are specific, measurable, and use action verbs
- Dilemmas connect to competencies and transferable judgment
- Pre-readings provide conceptual frameworks students will apply
- Teaching plan includes realistic time allocations totaling session length
- Board plan helps organize discussion and track arguments
- Sample analysis anticipates student responses for each option
- Key take-away messages connect case insights to broader principles
- Connection to EO 14265 or relevant policy is explicit
- Teaching note enables an instructor unfamiliar with the subject to facilitate effectively

Case Study Criteria (Ellet, 2018):

- Clear decision-maker (protagonist) positioned to require action



- Significant problem with consequential implications
- Defined options that structure initial analysis
- Constraints recognized that bound possible solutions
- Sufficient but incomplete information requiring judgment

Alignment Check:

- Discussion questions align with learning objectives
- Teaching plan supports answering discussion questions
- Key take-away messages reflect learning objectives
- Case narrative provides sufficient information to address all questions
- Dilemmas are explicitly addressed in the discussion plan



GENERATIVE AI DISCLOSURE STATEMENT

Generative artificial intelligence (AI) tools were used in preparing this work. Specifically, AI was used to support editing (sentence clarity, grammar, and formatting) and to assist with thematic analysis of interview transcripts, generation of fictional names for the case study, comparison of the case structure to HBS examples, and check alignment between case and the research's argument. These tools were used in accordance with NPS policy, and applicable institutional and faculty guidance on generative AI. The AI models used included OpenAI ChatGPT and Anthropic's Claude.

The authors reviewed, evaluated, and selectively incorporated AI recommendations. All AI-generated outputs were independently verified for factual accuracy before inclusion. The authors are solely responsible for all interpretations, analyses, and conclusions presented in this work.



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