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Benchmarking Philippines Submarine Acquisition Readiness: Lesson Learned from United States Major Capability Framework

December 2025

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Prepared for the Naval Postgraduate School, Monterey, CA 93943

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ABSTRACT

The Philippines is preparing to acquire its first submarine, a capability that requires complex management, technical expertise, and an established system. However, the Philippines' current procurement system is rooted in the Republic Act 9184 and the Defense System of Management (DSOM), which is considered a rigid, rule-based system that prevents the country from supporting advanced and complex acquisition programs like submarines. This study evaluates the Philippines' readiness by benchmarking its acquisition process against the United States Department of Defense Major Capability Acquisition (MCA) framework. The author uses the qualitative comparative case design to analyze the U.S. Virginia-class submarine program and the Philippines Jose Rizal-class frigate through process mapping and root cause analysis (RCA). The findings reveal that the U.S. MCA framework, such as milestone-driven acquisition, life cycle management, and workforce development, promotes efficiency and accountability, while the Philippines' procurement act (RA 9184) and DSOM cause procurement delays and weak integration across the system. This study recommends adopting a milestone-based approach, streamlining authority, institutionalizing the workforce, and strengthening the sustainment program. These results can guide future researchers in evaluating other defense related programs and developing reforms to strengthen acquisition readiness to support maritime security.

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LIST OF ACRONYMS AND ABBREVIATIONS

AAF	Adaptive Acquisition Framework
ACAT	Acquisition Category
ADM	Acquisition Decision Memorandum
AFP	Armed Forces of the Philippines
APB	Acquisition Program Baseline
CAE	Component Acquisition Executive
CDD	Capability Development Document
CDR	Critical Design Review
CJCS	Chairman of the Joint Chiefs of Staff
CJCSI	Chairman of the Joint Chiefs of Staff Instruction
CSAFP	Chief of Staff, Armed Forces of the Philippines
DAS	Defense Acquisition System
DAU	Defense Acquisition University
DCAPE	Director, Cost Assessment and Program Evaluation
DCAPS	Defense Capability Assessment and Planning System
DCR	DOTmLPF-P Change Recommendation
DFARS	Defense Federal Acquisition Regulation Supplement
DND	Department of National Defense (Philippines)
DoD	Department of Defense
DRMS	Defense Resource Management System
DSOM	Defense System of Management
DSPS	Defense Strategic Planning System

EMD	Engineering and Manufacturing Development
FAR	Federal Acquisition Regulation
FMS	Financial Management System
FRD	Full Rate Decision
FRP	Full Rate Production
FYDP	Future Years Defense Program
GAA	General Appropriations Act
GAO	Government Accountability Office
GPRA	Government Procurement Reform Act
ICD	Initial Capability Document
ICE	Independent Cost Estimate
ITRA	Independent Technical Risk Assessment
JCIDS	Joint Capabilities Integration and Development System
JROC	Joint Requirements Oversight Council
LCRB	Lowest Calculated Responsive Bid
LRIP	Low-Rate Initial Production
MCA	Major Capability Acquisition
MDA	Milestone Decision Authority
MDAP	Major Defense Acquisition Program
MDD	Materiel Development Decision
MSA	Materiel Solution Analysis
NSS	National Security Strategy
OT&E	Operational Test & Evaluation

PDR	Preliminary Design Review
PHILGELPS	Philippine Government Electronic Procurement System
PM	Program Manager
PPBE	Planning, Programming, Budgeting, and Execution
PPBS	Planning, Programming, and Budgeting System
PSS	Product Support Strategy
RDT&E	Research, Development, Test, and Evaluation
RA	Republic Act
RFP	Request for Proposal
SND	Secretary of National Defense
TMRR	Technology Maturation and Risk Reduction
U.S.	United States
VLS	Vertical Launching System

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I. INTRODUCTION

The power competition between the United States and the People's Republic of China has caused universal concern not only among regional states but also among the world's major powers. In the South China Sea, an emerging economic and military competition has increasingly become violent through an escalation in the conflict among rival states. The shift in the international climate has encouraged the Philippines, among smaller states, to look for avenues to ensure its national security interests. Numerous security challenges for the Philippines affect both its internal and external domains. Batongbacal (2021) notes that the Philippines' ability to project maritime power is constrained by persistent inefficiencies in its procurement system, making acquisition performance a critical determinant of naval capability. As Baviera (2012) emphasizes, naval modernization is essential for addressing this capability gap and enhancing maritime security operations.

The Philippines is set to shift its military assets for undersea warfare operations for Horizon 3 of the Armed Forces of the Philippines (AFP) (Nepomuceno, 2024). According to Nepomuceno (2025a), the Philippine submarine program is still in its infancy and lacks a formalized procurement framework. The Philippines needs to acquire a submarine and could consider a French submarine through learning from other countries through institutional adaptation, as well as through policy cross-border implementation (Lariosa, 2024). The Philippine Navy needs to adopt a defense procurement strategy where threat responses are mingled with proactive capability builds through the application of Virginia-class program principles for stakeholder management during early phases, as well as post-delivery maintenance.

This study assesses the Philippine Navy's submarine procurement readiness through the tested United States (U.S.) Major Capability Acquisition (MCA) paradigm applied by the U.S. Department of Defense (DoD). The study draws useful data from among the highly informative major procurement programs, notably the Virginia-class submarine and the Jose Rizal-class frigates. Through a comparative case study, the study identifies the weaknesses of the procurement system for the establishment of procurement reform strategies attuned to the needs for procurement in the Philippines.

Through the benchmarking approach, maritime states confronting naval risks are assisted in the development of their capability (Lariosa, 2024).

A. PROBLEM IDENTIFICATION

The South China Sea security issue in the Indo-Pacific region requires maritime states, including the Philippines, to embark on swifter modernization strategies and boost deterrence mechanisms due to the geopolitical environment. Analysts such as Batongbacal (2021) and Baviera (2012) argue that China's military buildup and increasingly assertive tactics have reshaped the regional security environment, forcing states like the Philippines to reconsider their defense posture. In this context, the Philippines needs to modernize its capabilities by shifting to undersea warfare; however, submarine operations are not easy for the Philippines, as it follows the traditional procurement method with an elongated process (Habulan, 2002).

The country has no expertise in managing complex acquisitions due to the lack of experience in executing submarine procurement. Lack of submarine force manifests the most basic readiness shortfall, for which sophisticated doctrinal, technical, and procedural skills for the operation of high-end assets must be developed (Stach, 2021). The Philippines' defense procurement is governed by Republic Act (RA) 9184 and RA 10349, but these statutes lack adaptive acquisition tools and life-cycle management systems (De Castro, 2020). The Jose Rizal-class frigate acquisition, while serving as a milestone for Philippine surface combatants, also exposed significant deficiencies in life-cycle planning, industrial partnerships, and system integration (Wertheim, 2022). The system limitations are exacerbated when moving from surface operations to underwater operations due to the need for increasingly sophisticated crew member training, stealth technology, and longer-term maintenance requirements.

The U.S. Department of Defense refined its acquisition approach by establishing the MCA framework, exemplified by the Virginia-class submarine program, which integrates milestone-based requirement control with long-term sustainment planning (Congressional Research Service, 2023b).

This study addresses two key challenges, which are the Philippine Navy's inadequacy in implementing submarine acquisition programs through both operational and institutional approaches, and the lack of information regarding how the MCA approach could improve Philippine defense procurement procedures. There is the risk of costly errors and missed opportunities for the Philippines as it attempts to acquire undersea deterrence due to its lack of an established acquisition model–based roadmap.

B. RESEARCH OBJECTIVES

(1) The analysis evaluates Philippine submarine procurement readiness with MCA comparison between the Virginia-class submarine program and the Jose Rizal–class frigate programs to identify operational gaps and best procedures.

(2) The research assesses the practicality of implementing MCA acquisition principles in Philippine defense operations to boost readiness for complex platforms to improve its submarine acquisition readiness through MCA framework benchmarking for better results.

C. RESEARCH QUESTIONS

Primary Research Question:

(1) How would the Philippines further its readiness to procure submarines by benchmarking its process with the U.S. MCA system?

Secondary Research Questions:

(2) What are the implications that may be drawn for the planned submarine program for the Philippines through the procurement of the Virginia-class submarines?

(3) What MCA-based acquisition best practices for undersea warfare capabilities could address potential weaknesses in the current Philippines acquisition system?

(1) What are the major procedures, organization, and differences between the research methodology

This research utilizes the qualitative comparative case study design in the assessment of Philippine readiness for submarine acquisition through benchmarking with the MCA framework. The research begins with a close examination of academic literature, official sources, defense policy briefs, and legislative materials. The research references the official sources by the Government Accountability Office (GAO), the

Defense Acquisition University (DAU), and Philippine sources on defense modernization.

Reviews of literature provide a dual foundation of theoretical understanding and pragmatic knowledge about acquisition systems in both countries, while at the same time determining complex inadequacies concerning acquisition. The analysis focuses on two major case studies, which demonstrate the application of the MCA approach by the U.S. Virginia-class submarine program for the management of undersea systems and the Philippines Jose Rizal–class frigate program, highlighting current inadequacies in the acquisition process. This study compares these programs to clarify the different strategies found in the acquisition settings concerning design integration, policy implementation, and life-cycle management.

The study examines the acquisition processes between capability needs and platform delivery through process mapping for both countries. Through this approach, it determines major bottlenecks in the Philippine acquisition process, including overlapping organizational structures and operational inefficiencies, which better inform critical reforms. Root cause analysis (RCA) examines the sources of deficiencies that plague submarine acquisition readiness in the Philippines.

This study blends the results from literature reviews, case studies, process maps, and RCA to develop a benchmarking matrix showing how the Philippine system compares to key U.S. MCA framework principles. The study identifies which changes are feasible with modification and which critical changes are required for the Philippines to manage sophisticated submarine program management. The study offers certain suggestions to defense planners and acquisition experts, and policymakers working on Philippine modernization programs.

D. RESEARCH SCOPE AND LIMITATIONS

This study includes an analytical comparison between the defense acquisition systems for the United States and the Philippines, with a particular focus on the readiness of the Philippines for submarines procurement. This is achieved through an analysis of the Department of Defense MCA framework using the Virginia-class submarine program

as an example of an orderly and streamlined acquisition process for complex platforms.

The following approaches are used in undertaking this analysis:

- Historical and policy context analysis: Includes an overview of modernization from the early 2000s to present, aligned with legislation such as RA 9184
- Comparative analysis: Benchmarks the Philippines' submarine acquisition readiness against the U.S. Department of Defense's MCA framework, using the Virginia-class and Jose Rizal–class programs as case studies
- Process mapping and RCA: Utilizes process mapping to chart acquisition workflows in both countries and RCA to identify barriers to submarine acquisition
- Acquisition system analysis: Examines regulations, milestones, stakeholder integration, and sustainment planning in both defense bureaucracies
- Geopolitical relevance: Anchors the research within the context of maritime tensions in the South China Sea, where there is a need for credible deterrence to address national security concerns

While the research aims to provide a comprehensive analysis, it also acknowledges limitations:

- Accessibility to classified data: Direct access to classified information, especially submarine program plans and operational doctrine, is restricted. This study relies on public and open-source documents.
- Temporal coverage: The research focuses on developments from 2000 to the present, which means that rapid policy shifts or future doctrinal updates beyond this period may not be covered.
- Geopolitical sensitivities: The analysis avoids speculation and maintains a neutral, policy-based stance.
- Dependence on secondary sources: Due to limited access to Philippine acquisition program documentation, the study relies on secondary literature, think tank reports, and official briefings.

This study operates within established parameters and boundaries to produce useful results and implementable recommendations for better preparation of the Philippines for submarine acquisition. In addition, it seeks to establish an effective defense acquisition system by taking the U.S. MCA as its guide, thereby providing an alternative to enhance maritime deterrence and support national defense.

E. SUMMARY

This chapter presents the key proposition that the Republic of the Philippines, as an archipelagic nation, is dealing with growing South China Sea security challenges, yet is simultaneously evaluating its institutional capability to procure submarines. The research investigates the importance of maritime defense and institutional barriers to large-scale capability acquisition (Baviera, 2012). The MCA framework of the U.S. Department of Defense uses the Virginia-class submarine program to demonstrate a milestone-based method that handles risks and costs and maintains long-term sustainability throughout the entire development process (Ort, 2024). The Philippine defense acquisition strategy, through its Jose Rizal–class frigates, demonstrates multiple problems with system integration and acquisition process governance and life-cycle maintenance (McGarry, 2024). Such differences underpin the key problem for the study: the Republic of the Philippines values the requirement for sub-maritime deterrence but lacks institutional sophistication and procedural architecture to implement such a program with efficiency (Philippine News Agency, 2019).

This research outlines multiple goals that focus on evaluating the Philippines' readiness for following MCA principles and extracting knowledge from Virginia-class analysis and evaluating its applicability to the Philippine acquisition processes. The research uses qualitative comparative case study methods together with process mapping and RCA to demonstrate acquisition workflows and detect organizational system problems. (Creswell & Creswell, 2017). It covers development primarily from the 2000s to the present to ensure relevance and draws from a pool of sources, including defense policy papers, legislative documents, and technical reports. This chapter also sets clear boundaries, acknowledging limitations in data accessibility due to classifications, resource constraints, and the geopolitical sensitivity of maritime defense. Nonetheless, it maintains a rigorous analysis that aims to produce actionable insights for Philippine defense policy-makers through procedural depth and institutional discipline of the U.S. MCA framework, and aims to contribute to a credible, modern, and sustainable undersea warfare capability.

Chapter II discusses various literature reviews of both the United States and the Philippines' defense acquisition systems to provide key concepts specifically focused on the MCA framework.

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II. REVIEW OF RELATED LITERATURE

This chapter is divided into two sections: the first section is an overview of the U.S. DoD defense acquisition system. The second section discusses the Philippines' defense acquisition system. These two sections provide an overview of both the United States and the Philippines' defense acquisition systems.

A. UNITED STATES DEFENSE ACQUISITION SYSTEM

The acquisition system of the United States is anchored in the "Big A" acquisition system, which is specified in the DoD 5000-series directives that outline "layers of bureaucracy and oversight for the Defense Acquisition Management System" (Mortlock, 2021). As a background, there are three functional areas in the "Big A" systems: the Defense Acquisition System (DAS), the Joint Capabilities Integration and Development System (JCIDS), and the Planning, Programming, Budgeting, and Execution (PPBE) system, as illustrated in Figure 1 (Ort, 2024). The overlap of these three areas focuses on the complexity of the acquisition process, which is critical for stakeholders considering the capability requirements, sourcing of funds, and management of the acquisition program. They must ensure that the requirements for the three areas are met. For the Virginia-class submarine program, the overlap in the "Big A" system is the MCA life cycle, which includes block requirements to meet the MCA framework milestones.

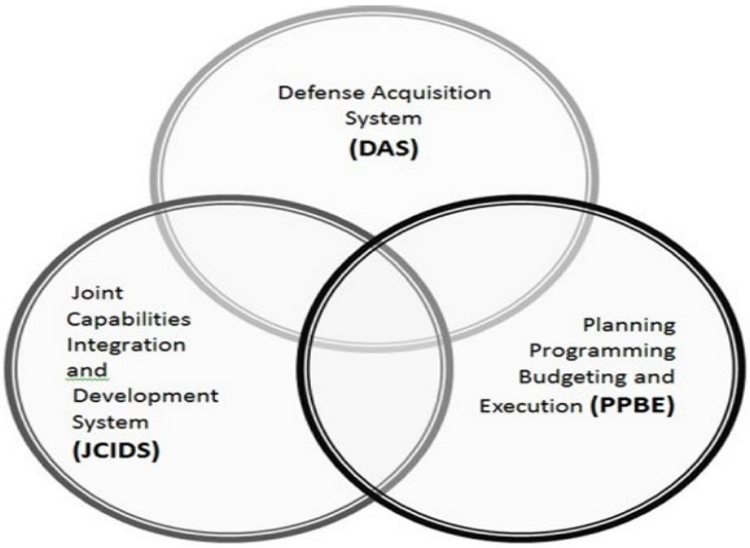

Figure 1. DoD Acquisition Environment Functional Areas. Source: Ort (2024).

The first functional area is the Defense Acquisition System (DAS). According to DoD Instruction (DoDI) 5000.02, "the DAS aims to support the National Defense Strategy in the enhancement of its force structure through innovation and results-oriented culture in achieving sustained competitive advantage" (DoD, 2020-a). In this context, the DoD utilized an adaptive acquisition framework (AAF) to support the DAS in delivering "effective, suitable, survivable, sustainable, and affordable solutions to end user in a timely manner" (DoD, 2020a). The acquisition guidance establishes key principles and step-by-step procedures to be followed in acquiring a defense weapon system. DoD Directive 5000.01 states that the primary objective of the defense acquisition process is to " acquire products and services that satisfy user needs and that make improvements to mission capability and operational support" (DoD, 2020b). As per CJCSI 5123.011, JCIDS provides a major program for records that can be used by the Joint Chiefs of Staff (CJCS) and the Joint Requirements Oversight Council in support of the National Security Strategy (Joint Chiefs of Staff, 2021). On the other hand, the third functional area is PPBE, and it is responsible for the allocation of resources to ensure the right funding amount is appropriated in each stage of the acquisition life cycle (DAU, n.d.-b)

1. Acquisition Regulations

The defense acquisition process operates under Title 10 of the United States Code, which functions as its main governing authority. Title 10 of the United States Code establishes the structure of the U.S. Armed Forces and assigns equipment procurement duties to the Army, Navy, and Air Force secretaries (Title 10 USC2366b, 2013). The law establishes specific guidelines for defense acquisition responsibilities and procedures and reporting to Congress, which enables both effective oversight and responsible management of national defense resources.

The DoD acquisition process operates under a complete set of rules, which include the Federal Acquisition Regulation (FAR) and the Defense Federal Acquisition Regulation Supplement (DFARS), and the DoD 5000 series. The documents establish oversight of the acquisition process, starting from planning until contract award and post-award management. The Federal Acquisition Regulation (FAR) establishes the government-wide rules for how U.S. agencies procure goods and services. Its defense-specific counterpart, the Defense Federal Acquisition Regulation Supplement (DFARS), adds provisions addressing areas unique to military procurement, such as security compliance, export controls, and intellectual property (DoD, 2020b). The DoD obtains essential materials and technologies for its operations through these specific provisions.

The two fundamental documents that define DoD acquisition policy include DoDI 5000.01, The Defense Acquisition System, and DoD Instruction (DoDI) 5000.02, Operation of the Adaptive Acquisition Framework. The DAS operates under DoDI 5000.01, which defines acquisition principles and policies and establishes departmental decision-making forums and acquisition official roles. The AAF receives its detailed implementation guidelines for system and service procurement under the DAS through DoDI 5000.02.

2. Joint Capability Interaction and Development System

The DoD classifies acquisition programs into Acquisition Categories (ACAT) according to cost, complexity, and strategic significance, as shown in Figure 2. According to Office of the Undersecretary of Defense for Acquisition and Sustainment

(Office of the Under Secretary of Defense for Acquisition and Sustainment [OUSD(A&S)], 2020), programs are classified into Acquisition Categories (ACATs) based on cost and complexity. For instance, ACAT I programs involve the most expensive and strategically significant acquisitions, while ACAT II and III programs cover progressively smaller projects with lower cost thresholds.

ACAT	Reason for ACAT Designation	Decision Authority

ACAT I	• MDAP[1] (Section 2430 of Title 10, U.S.C.)
	  ○ Dollar value for all increments of the program: estimated by the DAE to require an eventual total expenditure for research, development, and test and evaluation of more than $525 million in Fiscal Year (FY) 2020 constant dollars or, for procurement, of more than $3.065 billion in FY 2020 constant dollars
	  ○ MDA designation
	• MDA designation as special interest[3]
		ACAT ID: DAE
		ACAT IB: SAE[2]
		ACAT IC: Head of the DoD Component or, if delegated, the CAE

ACAT II	• Does not meet criteria for ACAT I
	• Major system (Section 2302d of Title 10, U.S.C.)
	  ○ Dollar value: estimated by the DoD Component head to require an eventual total expenditure for research, development, and test and evaluation of more than $200 million in FY 2020 constant dollars, or for procurement of more than $920 million in FY 2020 constant dollars
	  ○ MDA designation (Section 2302 of Title 10, U.S.C.)
		CAE or the individual designated by the CAE[4]

ACAT III	• Does not meet dollar value thresholds for ACAT II or above • Is not designated a "major system" by the MDA	Designated by the CAE[4]
Footnotes		
1. Unless designated an MDAP by the Secretary of Defense (SecDef), AIS programs[5], Defense Business System programs, and programs or projects carried out using rapid prototyping or fielding procedures pursuant to Section 804 of Public Law (PL) 114-92, do not meet the definition of an MDAP. 2. ACAT IB decision authority is assigned pursuant to Section 2430 of Title 10, U.S.C. Paragraph 3A.2.b. provides DoD implementation details. 3. The Special Interest designation is typically based on one or more of the following factors: technological complexity; congressional interest; a large commitment of resources; or the program is critical to the achievement of a capability or set of capabilities, part of a system of systems, or a joint program. Programs that already meet the MDAP thresholds cannot be designated as Special Interest. 4. As delegated by the SecDef or Secretary of the Military Department.		

Figure 2. Description and Decision Authority for ACAT I-III Programs. Source: OUSD[A&S] (2020, p. 19).

The JCIDS process overview appears in Figure 3. The JCIDS process starts by identifying joint military capability requirements before determining if existing validated requirements still apply. The requirement moves directly to its corresponding acquisition or change process when the requirement remains valid and successor documentation such as CDD or IS-CDD or DOTmLPF-P Change Recommendation (DCR) exists. The absence of a validated requirement prompts sponsors to create JCIDS documentation for gatekeeping and staffing, which results in either deliberate staffing for long-term capability development through documents or urgent staffing for complex requirements. The two pathways follow either the deliberate acquisition process or the urgent capability

acquisition process to integrate validated requirements into capability portfolio management for strategic defense objective alignment.

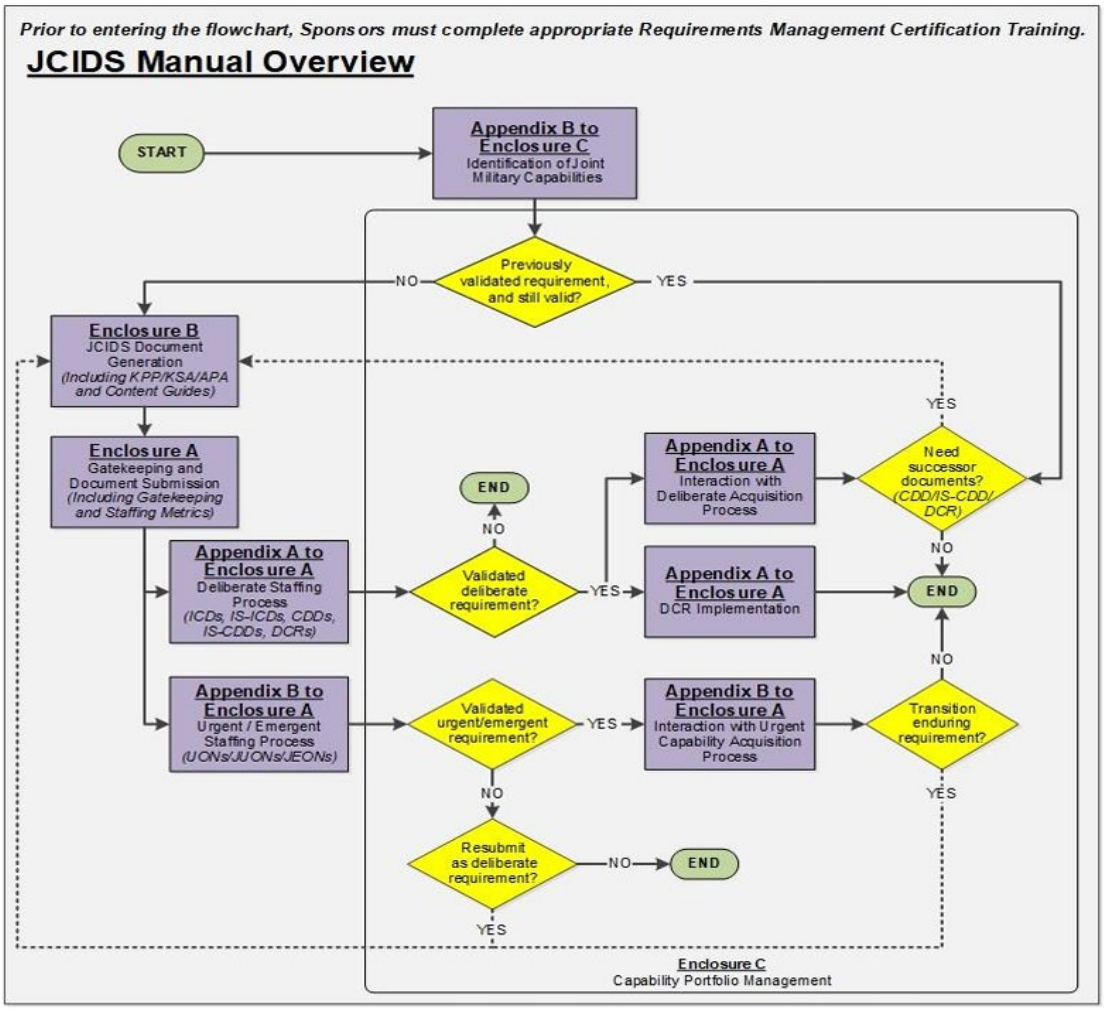

Figure 3. JCIDS process overview. Source: Joint Chiefs of Staff (2021, p. 4).

3. Adaptive Acquisition Framework

The AAF presents multiple pathways (see Figure 4), which enable fast delivery of capabilities and value to military personnel. The Adaptive Acquisition Framework (AAF) promotes flexibility by emphasizing streamlined policy, tailored pathways for programs, greater decision-making authority for managers, stronger reliance on data, proactive risk controls, and early planning for sustainment (DAU, n.d.-b). The pathways enable acquisition strategies to match the particular characteristics and needs of capability development according to DoDI 5000.02 (DoD, 2020-a).

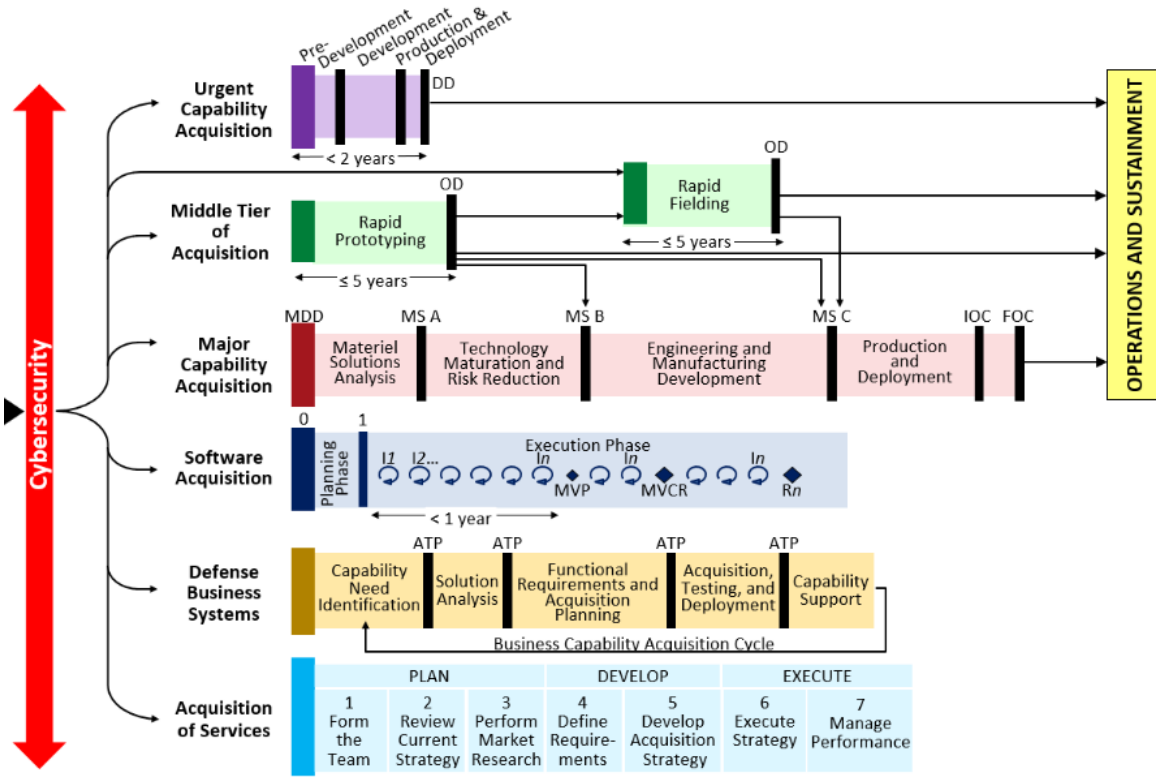

Figure 4. AAF Pathway. Source: DAU (n.d.-b).

4. Major Capability Acquisition

DoDI 5000.85 defines the MCA pathway as the standard DoD process for acquiring and modernizing military programs that provides long-term advantages for the DoD. The MCA follows a structured framework with formal milestone approvals guiding progression through each acquisition phase. This approach generally involves identifying "capability gaps, designing, developing, and integrating solutions, then testing, evaluating, producing, and sustaining the approved weapon system to address those gaps" (OUSD[A&S], 2020). The MCA pathway, as depicted in Figure 5, shows the different stages starting from identifying the capability gaps, research and development, risk analysis associated with the program prior production and deployment, and operations and sustainment, which are essential in successful capability acquisition. Also, DoDI 5000.85 establishes "policy, assigns responsibilities, and prescribes procedures" (OUSD[A&S],2020, p.1) for the MCA pathway like the Virginia-class submarine program.

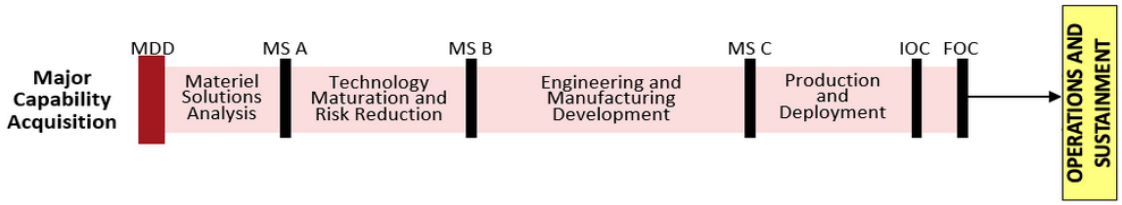

Figure 5. MCA Pathway. Source: DAU (n.d.-g).

Figure 6 presents the MCA model, which is elaborated further for a better understanding of the decision points and various phases that are applicable to MCA.

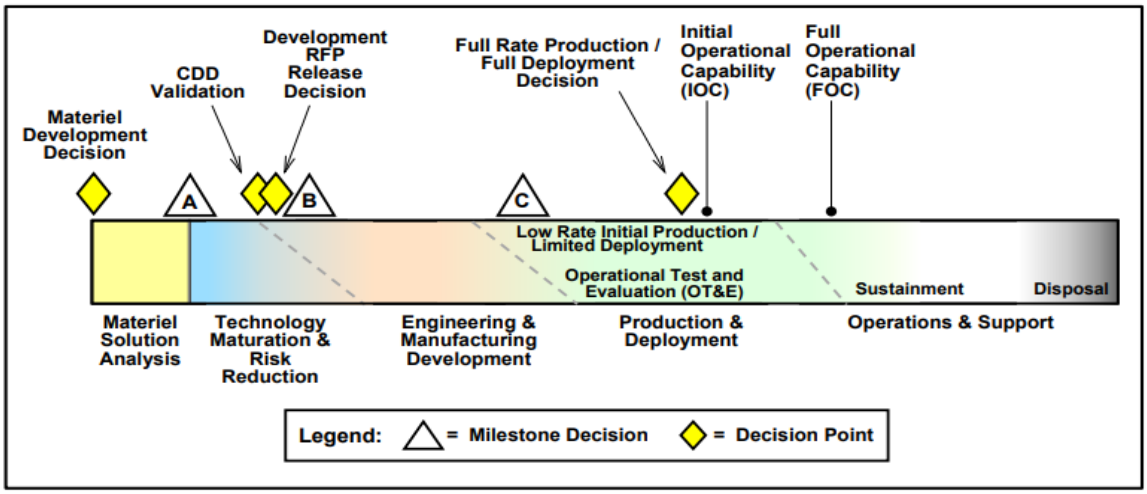

Figure 6. The MCA model. Source: OUSD[A&S] (2020, p. 10).

a. Materiel Development Decision

According to DoDI 5000.85, Materiel Development Decision is the initial entry to the MCA process accompanied by a validated requirement document such as Initial Capability Document (ICD) or its equivalent, together with Analysis of Alternative (AoA) study guidance and study plan (OUSD[A&S],2020). The directive further explains that Director for Cost and Program Evaluation (DCAPE) is responsible for issuing AoA study guidance and approving the study plan for MDAPs. Afterward, the Milestone Decision Authority (MDA) identifies the appropriate acquisition phase for program initiation and designates the initial review milestone (OUSD[A&S], 2020). These decisions are formally recorded in an Acquisition Decision Memorandum (ADM) together with the approved Analysis of Alternatives (AoA) study guidance and study plan (DAU, n.d.-h).

b. Materiel Solution Analysis

The MSA phase exists according to DoDI 5000.85 Section 3.6 (OUSD[A&S],2020). The directive mentioned that MSA phase involves performing the AoA and associated tasks to determine the most suitable acquisition concept. The validated ICD and AoA Study Plan serve as the foundation for this phase, which evaluates potential solutions through cost-performance-schedule-risk analysis, affordability assessments, sustainment planning, threat projections, and interoperability requirements integration. The Component Acquisition Executive (CAE) selects a Program Manager (PM) to lead the program office for preparing the next decision point (OUSD[A&S],2020). The directive further explains that MDA requires an Independent Cost Estimate (ICE) and an Independent Technical Risk Assessment (ITRA) before Milestone A approval for MDAPs while setting program goals.

The MSA phase contains essential activities, including senior review bodies leading the AoA process, preferred materiel solution evaluation, operational performance requirement definition, and technical concept development (OUSD[A&S],2020). The phase creates acquisition strategies at the highest level while confirming stakeholder agreements and reviewing technology transition plans. The MDA requires all necessary analyses and preparations to be finished before the acquisition phase can advance to the next stage (DAU, n.d.-i).

c. Milestone A

DoDI 5000.85 under Section 3.7 enables programs to start Technology Maturation and Risk Reduction (TMRR) activities through Milestone A approval (OUSD[A&S],2020. In this stage, the instruction validates the acquisition strategy and allows the release of the final RFP for TMRR work. As outlined by Office of the Under Secretary of Defense for Acquisition and Sustainment (OUSD[A&S],2020), draft CDD, which receives DoD component approval, assesses multiple factors that include solution affordability and feasibility, required technology development, trade space priorities, and technical and schedule risks with their corresponding mitigation plans and test strategy, and life-cycle mission data planning. MDAPs need complete affordability assessments to

verify FYDP funding availability and prevent delays from low technology or manufacturing readiness levels during fielding operations (OUSD[A&S],2020)

The MDA makes final decisions about acquisition strategies, TMRR approaches, RFP distribution, waiver applications, and phase transition rules while recording all decisions in ADM (OUSD[A&S],2020). The decision reviews evaluate readiness for advancement through data-based evaluations. The Defense Acquisition Board functions as an advisory body to support the process, but the MDA holds complete decision-making power (DAU, n.d.-j).

d. Technology Maturity and Risk Reduction Phase

The TMRR phase under the draft CDD and acquisition strategy works to minimize technology, engineering risks, integration costs, and life-cycle expenses until the point where EMD entry becomes feasible, according to Office of the Under Secretary for Defense of Acquisition and Sustainment DoDI 5000.85 Section 3.8 (OUSD[A&S], 2020). The TMRR activities concentrate on design and requirements trades to verify cost-effectiveness and practicality through continuous interaction with the community for CDD refinement and validation.

The acquisition strategy for MDAPs includes program timelines, risk management plans, funding details, business and intellectual property approaches, sustainment strategies, and security protocols. The phase requires multiple competitive sources to perform technology demonstrations in suitable environments while an Independent Cost Estimate (ICE) and an Independent Technical Risk Assessment (ITRA) take place. The development testing process follows the Test and Evaluation Master Plan to validate the CDD before the Development RFP release decision, while the Preliminary Design Review (PDR) occurs before Milestone B (DAU, n.d.-o).

e. Milestone B

DoDI 5000.85 authorizes EMD phase entry and resource allocation for contract award through Milestone B. The EMD phase starts after the development RFP review and correction process. The approval process demands evidence that all essential risks related to technology, threats, security, engineering, integration, manufacturing,

sustainment, and cost have sufficient mitigation measures in place with validated requirements and complete FYDP funding (DAU, n.d.-h). The MDAPs projects achieve their affordability goals through technical assessments and ICEs.

The MDA reviews and approves the program start, Acquisition Program Baseline (APB), EMD exit criteria, Low-Rate Initial Production (LRIP) quantity, and production or fielding technical milestones at Milestone C (DAU, n.d.-k).

f. Engineering and Manufacturing Development

The EMD phase receives its definition from DoDI 5000.85 through Section 3.11. The EMD phase creates and tests the selected materiel solution to verify all operational and security requirements and implied needs, which enables production, deployment, and sustainment decisions. The activities of this phase consist of finishing detailed hardware and software designs and conducting a Critical Design Review (CDR) to verify prototype fabrication or coding readiness and operational and developmental testing to check requirement compliance with KPPs and KSAs although PDR occurs before Milestone B when it was waived (DAU, n.d.-e).

The PM team verifies the Product Support Strategy (PSS) before releasing RFPs for Production and Deployment (P&D) after obtaining MDA approval. The EMD phase concludes when the design reaches stability, testing proves requirements validity, manufacturing processes demonstrate success, software sustainment begins, industrial capabilities become available, program security remains intact, and all MDA-directed exit and Milestone C entry criteria are fulfilled. The MDAP program requires completion of an Independent Cost Estimate (ICE) and Independent Technical Risk Assessment (ITRA) before beginning LRIP (DAU, n.d.-e).

g. Milestone C

As outlined in DoDI 5000.85 (OUSD[A&S],2020), the transition of the program into the P&D phase is formally authorized at Milestone C. The instruction further discuss that the approval follows a comprehensive review of "developmental testing and evaluation results, design maturity, manufacturing risks, and available funding"(OUSD[A&S], 2020 Section 3.12) . Once Milestone C is approved, the program

proceeds with awarding of contract in accordance with FAR specifically Subpart 16.001 which outlines contracts parts, and Subpart 34.005 which governs major system acquisition (FAR 34.005, 2025). Under FAR Part 16, contract types are categorized as either fixed-price or cost-reimbursement, both of which determine how performance responsibility, profits, and risks are distributed between the contractor and the government (FAR 16.101, 2025).

h. Low-Rate Initial Production and Full Rate Production Decision

The program can move to LRIP after passing initial operational testing and evaluation (OT&E) and receiving Milestone C approval to determine whether manufacturing produces systems that fulfill performance and reliability standards as described in DAU (DAU, n.d.-n). The results from LRIP assessments determine the Full-Rate Production decision and its associated factors according to DoDI 5000.85 Section 3.14.

i. Completeness and Sustainment

The Completeness and Sustainment phase is highlighted in Title 10, Section 2366b that MDAPs require verification of development test and evaluation completeness, together with sustainment support. These evaluations review the program's testing approach to ensure it effectively addresses potential risks and supports the achievement of program objectives.

5. SECNAVINST 5000.2G

When the Navy transitioned into the AAF through SECNAVINT 5000.2G, many substantial changes were incorporated into the new instructions. Some of the significant changes in the sections of the SECNAVINST 5000.2G for the Virginia class program include requirements for systems engineering, life cycle sustainment, and AoA. Policy and documentation are outlined in each step of a major acquisition program.

The two-pass seven-gate procedures provide "an integrated, collaborative, and disciplined framework for Department of the Navy (DON) senior leaders from the requirements, resources, acquisition, and warfighting communities to make sound

investment decisions at key points within the JCIDS and the DAS" (Department of the Navy, 2022, Enclosure 16, p. 1). The two passes serve to generate requirements and obtain the program, while the seven gate reviews function as the main program documentation, which includes ICD, AoA, CDD, SDS, RFP, Post IBR/CDD Update/Pre FRP DR, sufficiency, and sustainment. Figure 7 depicts this two-pass, seven-gate governance model.

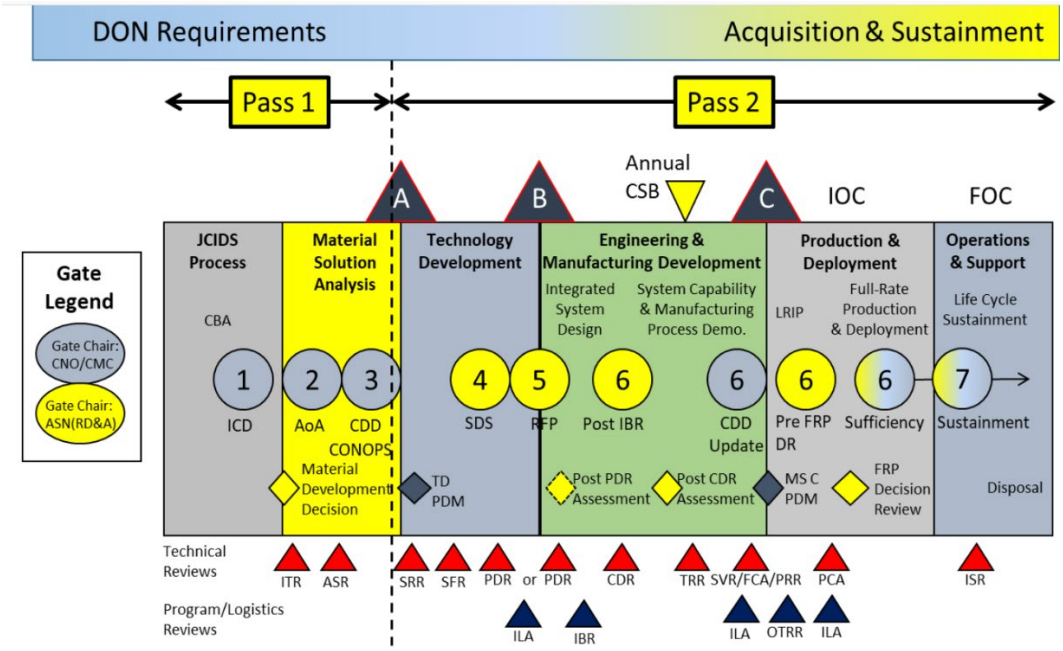

Figure 7. Two pass, seven gate governance model. Source: Department of the Navy (2022, Enclosure 16, p.4).

B. PHILIPPINES DEFENSE ACQUISITION SYSTEM

1. Background of RA 9184 (Government Procurement Reform Act)

The Republic Act 9184 or the Government Procurement Reform Act (Republic of the Philippines, 2003) establishes the guiding principles for the Philippines DAS and aims to help government entities maintain good governance in procuring goods and services. Republic Act 9184, also known as the Government Procurement Reform Act (GPRA), explicitly states its aim to "promote transparency, competitiveness, streamlined procurement, accountability and public monitoring" in all government transactions (Republic of the Philippines, 2003, Section 2). In this context, this act has designed different methods such as public bidding and mandatory publication of bids in the

Philippine Government Electronic Procurement system (PHILGELPS). PHILGELPS is the primary source in all Philippine government procurement. In this way, the public can have both a better understanding of procurement processes and opportunities to participate through competitive bidding.

Moreover, GPRA also promotes accountability through creation of a bids and awards committee under Article V. The article V identifies the functions of the committee.

> Advertise and/or post the invitation to bid, conduct pre-procurement and pre-bid conferences, determine the eligibility of prospective bidders, receive bids, conduct the evaluation of bids, undertake post-qualification proceedings, recommend award of contracts to the Head of the Procuring Entity or his duly authorized representative: provided, that in the event the Head of the Procuring Entity shall disapprove such recommendation, such disapproval shall be based only on valid, reasonable and justifiable grounds to be expressed in writing, copy furnished the BAC; recommend the imposition of sanctions in accordance with Article XXIII, and perform such other related functions as may be necessary, including the creation of a technical working group from a pool of technical, financial and/or legal experts to assist in the procurement process. (Republic of the Philippines, 2003, Article V, p. 5)

This article further elaborates the function to ensure the legality and fairness of the procurement activities under its jurisdiction. Despite the effort of the government in maintaining good governance at all levels of the government, defense acquisition requires a certain level of flexibility considering emerging environments such as shifts in strategic policy, maritime security concerns, force restructuring, and modernization programs. This context brings a possible concern for defense acquisition reforms, benchmarking on the successful elements of U.S. defense acquisition such as MCA to enhance its DAS relative to the emerging maritime security threats.

2. Defense System of Management

The Defense System of Management (DSOM) is designed to restructure the Philippine DAS for transparency and fairness of procurement administration. As David and Taliaferro (2019) explain, the Defense System of Management (DSOM) serves as an integrated governance framework that aligns strategic planning, capability development,

acquisition, and resource management across functional lines, enabling coordinated decision-making and institutionalizing defense strategy in budget execution. DSOM is composed of four mutually related components such as the Defense Strategic Planning System (DSPS), the Defense Capability Assessment and Planning System (DCAPS), the Defense Acquisition System (DAS), and the Defense Resource Management System (David & Taliaferro, 2019).

Merely enumerating each section of DSOM is not enough to understand its role in acquisition system. The DSOM process is illustrated in Figure 8, linking each component that contributes to a sustainable and strong defense structure.

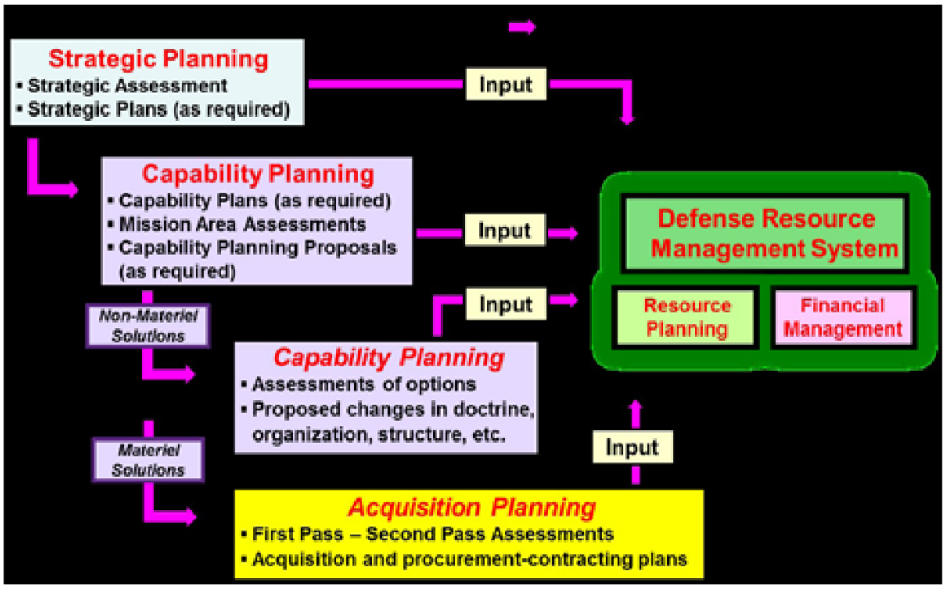

Figure 8. DSOM Processes and Product. Source: David & Taliaferro (2019).

a. Defense Strategic Planning System

The Defense Strategic Planning System (DSPS) system determines essential security problems and their peripheral elements, which affect defense planning and programming, according to David and Taliaferro (2019). The foundation of DSPS evaluations stems from national security goals. The assessments reveal security challenges while presenting multiple defense strategies to handle these problems (David & Taliaferro, 2019). The assessments serve as planning tools to determine essential matters that receive programming priority. The connection between DSPS and DSOM appears in Figure 9.

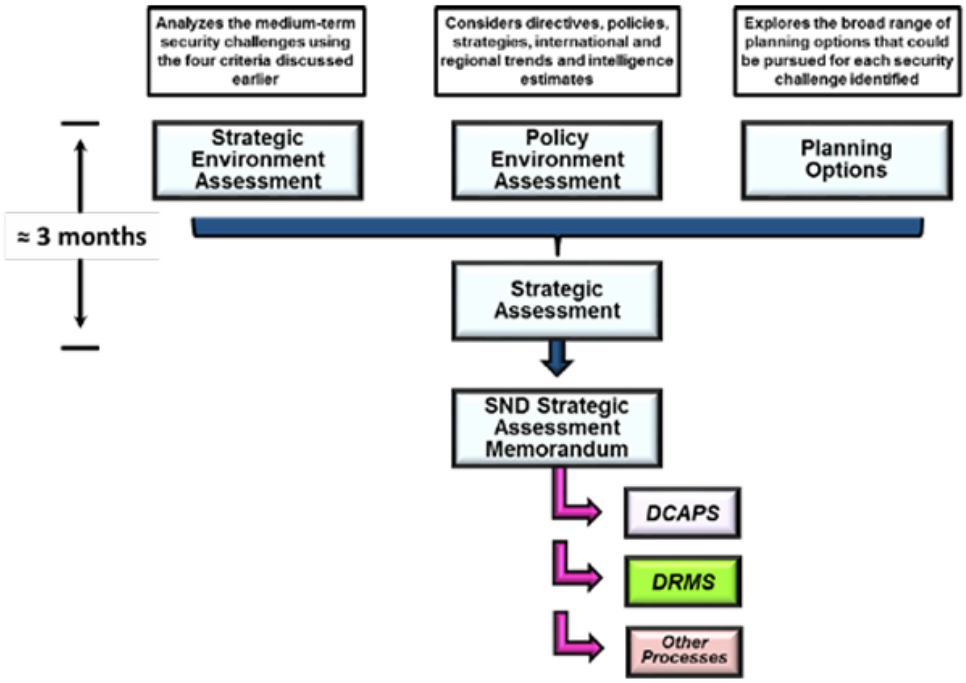

Figure 9. DSPS Product and Relationship to DSOM. Source: David & Taliaferro (2019).

b. Defense Capability Assessment and Planning System (DCAPS)

David and Taliaferro (2019) describe DCAPS as a system for force planning. The DCAPS framework guides Philippine defense planning by diagnosing existing capability gaps, adjusting current assets, and projecting new capability needs to address emerging security environments (David & Taliaferro, 2019). The diagram of DCAPS appears in Figure 10.

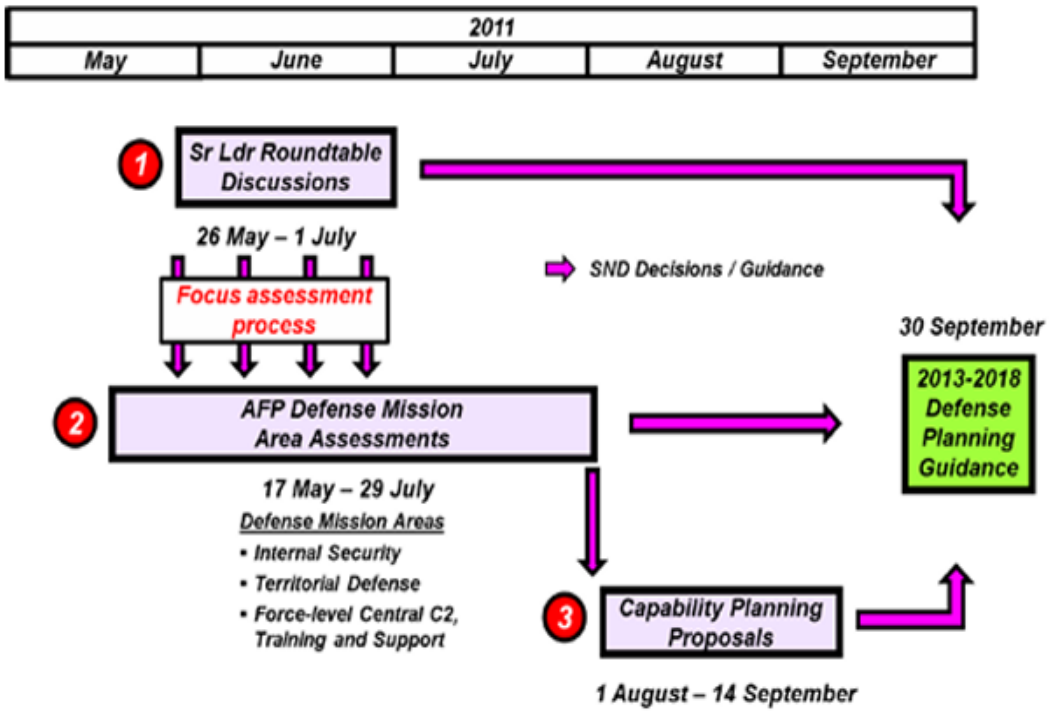

Figure 10. DCAPS Process Flow. Source: David & Taliaferro (2019).

To discuss further, the DCAPS process flow as illustrated in Figure 9 has three major sections, senior leader roundtable discussion, AFP defense mission area assessments, and capability planning proposals. The results of the assessments is forwarded to the secretary of the national defense (SND) for approval and signature. Then, the SND issues a memorandum containing the results of the assessments to allow the various assessment teams to draft a proposal to address the identified gaps and forward the same to the SND for approval. Then, these proposals will be approved by the SND and subsequently, the SND will issue two capability planning decision memoranda to address the capability gaps and challenges. The SND memoranda contains two methods that can be used to address a capability shortfall. Once option is a material solution, which can be forwarded to the DAS while the other option, a non-material solution, can be addressed by DCAPS. The end product of the DCAPS process is the SND guidance and decision known as "Defense Planning Guidance" (David & Taliaferro, 2019).

c. *Defense Acquisition System*

David and Taliaferro (2019) define the DAS as "designed to evaluate potential options for obtaining major equipment items and for developing fiscally constrained acquisition plans." As illustrated in Figure 11, the DAS has two major activities such as analysis of potential approaches and analysis of potential alternatives.

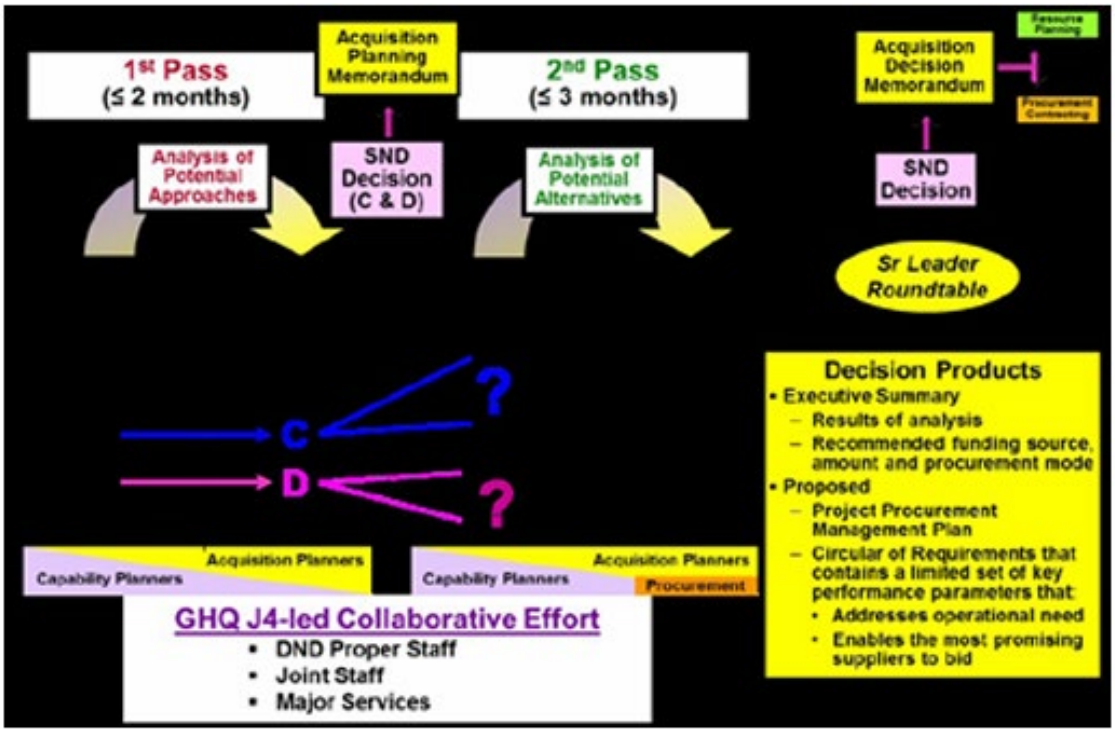

Figure 11. DAS Process Flow. Source: David & Taliaferro (2019).

These two-pass assessment efforts by the Department of National Defense (DND) are adopted from the Australian Department of Defense according to David and Taliaferro (2019). The results of DAS assessments are formalized in the Acquisition Decision Memorandum (ADM) following the acquisition decision, procurement, and contracting activities in accordance with the existing procurement law.

d. *Defense Resource Management System*

The Defense Resource Management System (DRMS) is recognized as the most developed among the four components of the DSOM, having evolved from the Multi-Year Capability Planning System initiative (David & Taliaferro, 2019). This system is composed of two key sub-systems: the Planning, Programming, and Budgeting System

(PPBS) and the Financial Management System, which provide a structured and coherent framework for guiding defense resource planning, allocating limited resources in a competitive defense environment, and evaluating outcomes against established "programmatic and financial management objectives" (Bautista & Zheng, 2023).

The PPBS executes a yearly resource planning process, which establishes analytical accuracy as the foundation for decision-making (David et al.,2017). The journal further states that PPBS system delivers more than analytical capabilities because it establishes a strong analytical foundation, which enables the SND and resource managers to make strategic program choices (David et al.,2017). Further discussed in the journal is that the PPBS works with DSOM components to convert strategic decisions into operational plans (David et al.,2017). The system provides senior leaders with complete resource visibility, which enables them to distribute resources optimally for best results (David et al.,2017). The PPBS receives funding from multiple sources, which include the General Appropriations Act (GAA), United Nations peacekeeping operations reimbursements, and the AFP Modernization Act Trust Fund (Bautista & Zhang, 2023; David et al.,2017). The PPBS supports defense planning objectives through its production of two essential outputs, which include the Defense Planning Guidance, which outlines six-year objectives and priorities, and the Defense Program, which explains resource management strategies to reach SND strategic goals (David et al., 2017).

On the other hand, the Financial Management System (FMS) is operating continuously throughout the year as the foundation for expenditure monitoring and ensuring that resources are used strictly for their intended purposes (David & Taliaferro,2019). According to journal article (David & Taliaferro, 2019), this system incorporates quarterly assessments of SND-CSAFP performance, measuring progress against the financial and programmatic targets established by the SND. The key outputs of the Financial Management System include annual plans and budgets (APB), quarterly performance and financial execution reports, and budget adjustment directives, which are all designed to reallocate funds as needed to support the achievement of high-priority objectives (David & Taliaferro,2019). Figure 12 depicts the DRMS process.

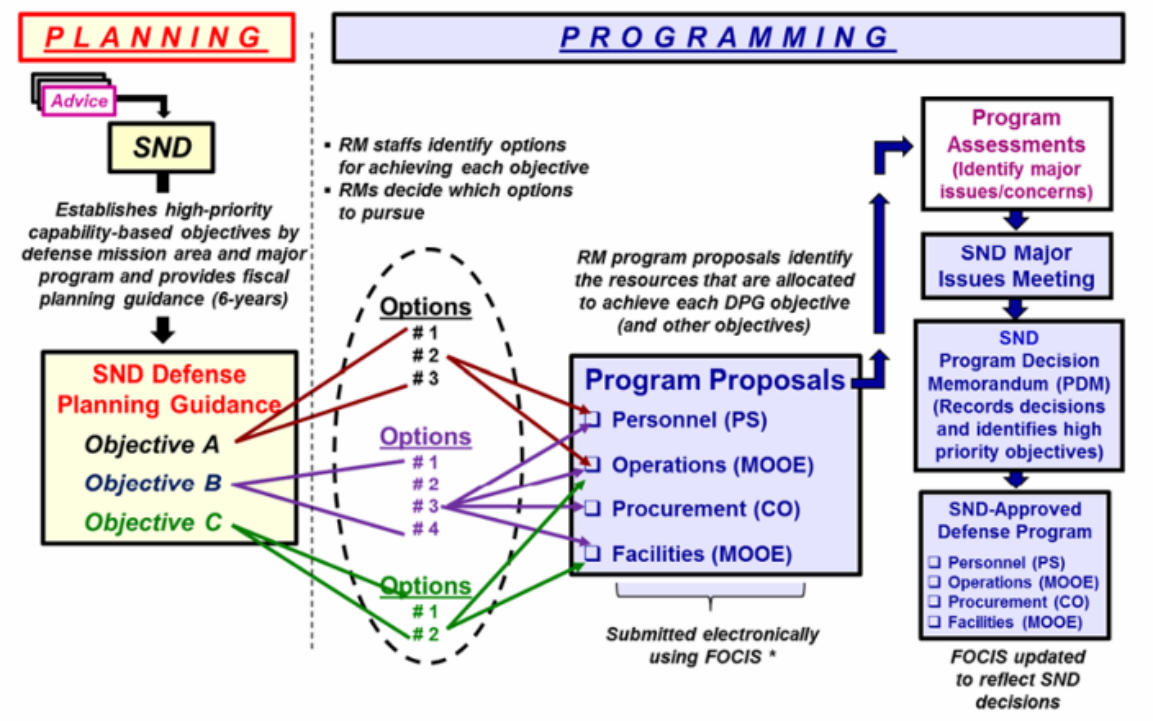

Figure 12. DRMS Process Flow. Source: David & Taliaferro (2019).

3. Role of DSOM in the Acquisition System

The DND operates under its own DAS, which is described in the DSOM handbook (David et al., 2017). The DAS system enables the DND and AFP to follow a standardized process for acquiring defense materiel, including weapons and equipment, and supplies needed to fulfill operational readiness and capability standards (Bautista & Zhang, 2023; David et al., 2017). The DAS system implements a conventional four-step acquisition process, which includes planning, followed by bidding, then awarding, and finally contract implementation (David et al., 2017). The following section provides a concise overview of each stage in the process.

a. Planning Stage

The first stage requires determining what the defense sector needs. The process requires establishing solution requirements through technical specifications and determining resource requirements to fulfill these needs (David et al., 2017). The journal further discuss that the acquisition process receives its essential structure from the development of procurement plans and budget proposals during this stage.

b. Bidding Stage

The bidding phase starts after project plans receive approval during this stage, also known as procurement phase (David et al., 2017). All proposals undergo competitive bidding during this stage to determine which ones meet the technical requirements and financial standards defined in the planning stage (Republic of the Philippines, 2003). The evaluation process at this stage upholds both transparency and competition according to GPRA (2003) principles.

c. Awarding Stage

The contract is awarded to the bidder offering the Lowest Calculated Responsive Bid (LCRB), meaning that the offer fully meets all stipulated requirements and the offered price is most advantageous to the Philippine government as prescribed in GPRA (2003). This approach safeguards value for money and promotes fiscal responsibility in defense spending (Republic of the Philippines, 2003).

d. Contract Implementation Stage

The winning bidder executes the contract under DND supervision. The final stage involves delivering goods or services while inspecting them for quality before accepting them and making payments according to GPRA (2003) contractual terms.

C. SUMMARY

The second chapter presents an examination of the DASs of the United States and the Philippines through an analysis of their organizational frameworks, operational procedures, and regulatory structures. The United States follows the "Big A" framework, which combines DAS with JCIDS and the PPBE process. The MCA pathway enables milestone-based decision-making to achieve capability alignment and risk management, and resource optimization. As part of this system, the Department of the Navy under SECNAVINST 5000.2G codified program oversight through the two-pass, seven-gate governance model. The model enables acquisition programs to progress through predefined decision stages which begin with validation followed by planning before executing the program. The PPBE process requires approval stages, which are known as

the “two passes” to validate capability needs in Pass 1 and to approve funding and start execution in Pass 2. The seven gates function as time-based checkpoints which confirm both the advancement of budget execution and timeline progress and system readiness for maintenance. The two bodies operate as a unified system to establish a controlled framework that monitors major acquisition programs, including the Virginia-class submarine, under the AAF.

On the other hand, the Philippine approach is governed by the Government Procurement Reform Act (RA 9184) and DSOM, which includes the DSPS, DCAPS, DAS, and DRMS, which follows four stages, such as planning, bidding, awarding, and contract implementation to ensure transparency, competition, and fiscal prudence in defense procurement.

The research methodology in Chapter III depends on the comparative framework analysis, which enables the evaluation of acquisition frameworks for this study.

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III. METHODOLOGY

The research design, together with data collection methods and analytical tools, are presented in this chapter to evaluate the Philippines' readiness for complex acquisition platforms through major naval programs. The research design uses qualitative methods to study the Philippine acquisition process through comparative case studies and process mapping, and root cause analysis (RCA) for benchmarking against the United States' established MCA framework. The system aims to detect operational weaknesses and optimize methods that will help enhance the Philippine defense procurement system.

A. RESEARCH DESIGN

Following Creswell and Creswell (2017), this study adopts a qualitative research design, which emphasizes explaining processes and organizational dynamics rather than producing statistical generalizations. The design explains the intricate defense procurement system along with its governance framework and interagency coordination processes. The research uses comparative case studies to analyze the U.S. Virginia-class submarine program which operates as an Acquisition Category (ACAT) I program under the Adaptive Acquisition Framework (AAF) and the Philippine Jose Rizal–class frigate acquisition process under the Philippine DAS. The research analyzes these cases to discover operational knowledge which will assist the Philippine Navy in acquiring submarines.

B. DATA GATHERING METHODS

Data was gathered from a combination of primary and secondary sources. Primary data included official policy documents, acquisition manuals, and government procurement guidelines, such as the JCIDS Manual (2021), DoDI 5000.85 (2020), and the Defense Systems of Management (DSOM) of the Philippine Department of National Defense (DND). Secondary data consisted of scholarly articles, defense acquisition case studies, academic theses from the Naval Postgraduate School, and reports from defense think tanks. Additionally, relevant procurement regulations, such as RA 9184 (Republic of the Philippines, 2003), were reviewed to contextualize the Philippine framework.

C. ANALYTICAL TOOLS USED

1. Comparative Case Analysis

The comparative case study method examines the U.S. MCA pathway through its milestones and risk-reduction phases and ACAT structure against the Philippine DAS process, which consists of four main stages: planning, bidding, awarding, and contract implementation. The United States verifies requirements through JCIDS and milestone reviews and AAF's customized pathways (DAU, n.d.-b). On the other hand, the Philippine acquisition process follows RA 9184, which requires absolute adherence to rules but selects the lowest-cost bidding and transparency over life-cycle performance requirements.

2. Process Mapping

Patton (2014) suggests that qualitative inquiry helps uncover and clarify the complex relationships within organizations and social systems. In this study, process mapping is used as a tool to visualize these relationships within acquisition frameworks. Researchers can track decisions and actions through conceptualizing inquiry as a mapping endeavor as they unfold over stages of a process. As such, this study utilizes process mapping to render visible U.S. MCA pathway acquisition workflows and those of the Philippine DAS. This corresponds with Patton's methodological focus on visual materials that enable researchers to reduce complex experiences to intelligible patterns, thereby identifying bottlenecks, redundancies, and system-level delays in the stages of process.

3. Root Cause Analysis

This study employs RCA to examine systemic inefficiencies in the Philippine defense acquisition process, taking the Jose Rizal–class frigate procurement as a case example. In the case of the Jose Rizal-class frigates, requirement setting and bidding faced repeated delays due to shifting specifications and strict compliance procedures. Budget limitations and contract disputes further slowed negotiations, while delivery and commissioning were hindered by supplier-related issues and capability shortfalls

(Wertheim, 2022; GAO, 2019). In this context, RCA methods are applied to uncover the underlying causes, which move analysis beyond surface symptoms to the structural sources of problems (Serrat, 2009).

These findings are consistent with assessments of DoD acquisition, particularly that rigid processes, funding instability, and oversight complexity often generate recurring inefficiencies (GAO, 2019). The analysis provides a benchmark against the Virginia-class submarine program with respect to risk mitigation practices, stabilization of requirements, and life-cycle sustainment planning.

D. SUMMARY

This chapter presents different research methods that combine qualitative comparative analysis with process mapping and RCA to study Philippine submarine acquisition readiness. The evaluation of institutional performance and procedural challenges, and reform opportunities becomes possible through the comparison between the U.S. MCA model and the Philippine DAS framework. The combination of policy analysis with visual mapping and root cause identification creates findings that link theoretical knowledge to practical realities, which support the recommendations in the following chapters.

Chapter IV presents an evaluation of Philippine readiness for submarine acquisition through multiple assessment methods, which were used to assess the country's preparedness for complex platform acquisition.

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IV. ANALYSIS AND FINDINGS

This chapter discusses the analysis and findings of the study that give light to the research objectives and questions outlined in Chapter I. The analysis uses comparative evaluation of the U.S. MCA framework and the Philippine DAS with the Virginia-class submarine program and the Jose Rizal–class frigate program as case studies. The research applies process mapping and root cause analysis (RCA) to identify operational problems in the Philippine system. The research assesses the Philippines' readiness to buy submarines and examines how MCA-based principles can improve acquisition methods in the country.

A. COMPARATIVE CASE STUDY ANALYSIS

This research evaluates Philippine submarine readiness through a comparative case study analysis of two major naval procurement programs, such as the U.S. Virginia-class submarine program and the Philippine Jose Rizal–class frigate program. The research examines two procurement programs that demonstrate opposite ends of acquisition complexity through the U.S. MCA framework and the Philippines' defense procurement system under RA 9184 and DSOM (David & Taliaferro, 2019). The evaluation of these programs reveals optimal acquisition methods, system vulnerabilities, and essential shortcomings, which include rule-bound, LCRB selection, fragmented governance and weak sustainment that affect the Philippines' ability to handle complex platforms (Bautista & Zheng, 2023; David & Taliaferro, 2019). These comparative assessments serve as a basis to create process maps and identify root causes, which results in a complete assessment of acquisition readiness.

1. Virginia Class Submarine Program

a. Background

The Virginia-class (SSN-774) submarine program started to replace the outdated Los Angeles–class submarines to maintain U.S. undersea supremacy. The Virginia-class submarines are nuclear-powered fast-attack platforms designed for sustained stealth operations, capable of performing anti-submarine, strike, and intelligence missions

(GovTribe, n.d.). The program emerged during the 1990s as a result of post-Cold War military restructuring efforts, which focused on creating affordable and modular systems (Ort, 2024). The U.S. Navy has established the program as its largest and most advanced shipbuilding initiative because each ship costs around $3.4 billion to purchase (O'Rourke, 2025).

b. Role of MCA Framework

The Virginia-class has followed the MCA pathway of DoDI 5000.02 throughout its life cycle, from Milestone A (concept refinement) to Milestone C (production and deployment) (DAU, n.d.-g). The MCA framework established a structured oversight system through specific decision points, which enabled technology progress and industrial base growth, and product life-cycle maintenance. The program implemented its technological system through a series of sequential block improvements from Blocks I to V, which included the Virginia Payload Module (VPM) for better strike capabilities (United States Navy, 2025). The block structure of MCA follows the evolutionary acquisition model of the Navy, which allows for quick capability delivery through continuous integration of new technologies (Knox et al., 2019).

c. Challenges and Best Practices

The Virginia-class program encountered major difficulties in cost management together with industrial base production capacity and technological development risk management. The program controlled initial cost overruns through multi-year program contracts and block buys, which allowed stable production and reduced unit expenses by using big production volumes (O'Rourke, 2025). The delivery schedule faced additional difficulties because of workforce shortages and supply chain restrictions, which required Electric Boat and Huntington Ingalls Industries to work in close partnership (The Maritime Executive, 2024).

Future construction will achieve its best results through modular building methods and public–private partnerships between industry and government, and by aligning procurement systems with future military design requirements (GAO, 2025b; Office of Systems Engineering and Architecture, 2025; OSD, 2024). The industrial base studies

showed that capacity-planning needs to happen for the simultaneous production of Virginia-class and Columbia-class submarines (Ort, 2021).

d. Lessons Learned

Several lessons emerge from the Virginia-class program. First, early adoption of affordability initiatives and multiyear contracting proved essential in managing costs over decades of production (Knox et al., 2014). Second, the use of incremental block upgrades provided a flexible model for integrating emerging technologies while avoiding wholesale redesign. Third, industrial base sustainment must be planned holistically; the submarine enterprise requires long-term workforce development, supplier investment, and stable funding commitments (O'Rourke, 2023). Finally, the Virginia-class program underscores how structured MCA processes can deliver complex capabilities when paired with adaptive acquisition strategies and robust industry partnerships.

2. Jose Rizal–Class Frigate Program

a. Program Overview

The Jose Rizal–class frigates mark a transformative step in the modernization of the Philippine Navy. The two frigates BRP *Jose Rizal* (FF-150) and BRP *Antonio Luna* (FF-151) were built by Hyundai Heavy Industries (HHI) in South Korea for multi-role warfare capabilities that include anti-air, anti-surface, and anti-submarine operations (Naval Technology, 2020). The program represents the transition of the Navy from its previous focus on guns to its current status as a force that uses guided missiles and electronic warfare systems for better maritime security and national defense (Nepomuceno, 2025).

b. Funding Source

The Frigate Acquisition Project (FAP) was launched under the Armed Forces of the Philippines (AFP) Modernization Act. Initially budgeted at PHP 18 billion in 2013, the program underwent a two-stage bidding process (Naval Technology, 2020). By 2016, HHI was declared the lowest post-qualified bidder, with a winning bid of PHP 15.75 billion approximately US$338.8 million (Naval Technology, 2020) The contract was

signed in October 2016, formalizing the acquisition of two frigates aligned with Horizon 2 of the AFP Modernization Program (Naval Technology, 2020).

c. Formalizing the Acquisition Project

The project was instituted through Republic Act 10349, which extended and revised the AFP modernization effort (Congress of the Philippines, 2012). The ships needed to meet operational requirements, so technical working groups were created for this purpose. The system specifications became final after the team completed their work on operational functionality, cost efficiency, and system integration, yet the Project Management Team (PMT) maintained their disagreement about the combat management system and sensor selection (Philippine News Agency, 2019).

d. Awarding of Contract and Delivery

Construction milestones began with the first steel cutting in 2018, followed by the launch of BRP *Jose Rizal* in May 2019 (Philippine News Agency, 2019). The vessel was commissioned in July 2020, despite delays caused by the COVID-19 pandemic. Its sister ship, BRP *Antonio Luna*, was launched in November 2019 and commissioned in March 2021 (Philippine News Agency, 2019). Each frigate is armed with a 76mm Oto Melara main gun, a 30mm Aselsan SMASH gun, Simbad-RC missile launchers with Mistral-3 missiles, SEA torpedo launchers, and provisions for vertical launch systems (Max Defense Philippines, 2019). Aviation facilities support an AW159 Wildcat helicopter capable of antisubmarine operations (Wertheim, 2022).

e. Deployment

The Jose Rizal–class frigates have strengthened the Offshore Combat Force (OCF) of the Navy because they enable the Navy to perform long-range maritime surveillance and regional training operations after their deployment (Lariosa, 2023). BRP *Jose Rizal* joined the Rim of the Pacific (RIMPAC) exercise in 2020 during its first year of operation to demonstrate the Philippines' expanding international defense partnerships (Wertheim, 2022). The frigates now perform main duties such as defending maritime choke points, safeguarding sea lines of communication, and patrolling the 20,000-mile-long Philippine coastline (Wertheim, 2022).

The combination of sophisticated sensors and weapons platforms and the 30-day sea operation capability of these ships represent a significant improvement in naval defense systems and operational capabilities (Naval Technology, 2020).

f. Sustainment

The Jose Rizal–class frigates need continuous maintenance support to keep them operational and ready for use at affordable costs from the start to finish of their service life. The Philippine Navy, DND, and HHI share responsibility for post-delivery support of the ships, while technical support agreements for maintenance, repair, and overhaul (MRO) operations exist for the first years of service (Naval Technology, 2020).

The sustainment of Jose Rizal-class frigates depends on proper logistics and spare parts inventory maintenance. The initial supply of spare parts, technical documentation, and tools came from HD Hyundai Heavy Industries (HHI) but the Naval Logistics Center (NLC) and Naval Sea Systems Command (NSSC) now handle ongoing inventory and supply chain operations (Ng, 2024). Their sustainment responsibilities include developing maintenance strategies for critical systems such as the TRS-3D radar, Naval Shield Combat Management System, and propulsion units, with an emphasis on pre-purchasing essential spare parts and forming long-term repair agreements with foreign suppliers (Philippine News Agency, 2019). The crew's proficiency level stands as a vital factor because HHI and its subsystem partners, Hensoldt, Hanwha, and Aselsan, provided training for secure system operation (Wertheim, 2022). Personnel need continuous professional development to stay proficient in operating complex torpedo and radar and electronic warfare systems (Wertheim, 2022).

The Navy continues its efforts to construct new maintenance facilities. The Philippine government has chosen Subic Bay as a maintenance center for ships, while public–private partnerships will help increase domestic ship repair capabilities (Lariosa, 2025; Nepomuceno, 2020). The Jose Rizal–class ships follow a "fitted-for-but-not-with" (Vavasseur, 2021) design, which allows for future vertical launching system (VLS) installations to address changing security requirements (Philippine News Agency, 2019). The Integrated Platform Management System (IPMS) provides predictive maintenance

and real-time monitoring capabilities through its advanced integration features, which support West Philippine Sea operational readiness (Wertheim, 2022).

The Virginia-class submarine and Jose Rizal–class frigate programs show the different approaches that the United States and the Philippines use to buy military equipment. The U.S. MCA framework demonstrates that complex platforms can be delivered through a combination of structured milestones, incremental upgrades, and professionalized acquisition workforce practices, which handle risk and cost management during multiple decades of production. The Philippine system achieved its first modern frigates acquisition but demonstrated weaknesses in sustaining operations, maintaining institutional stability, and complete system integration. The two systems show different results that need further investigation of their acquisition processes through visualization techniques. The following section presents process mapping to illustrate the step-by-step procedures, decision points, and bottlenecks that further explain the root causes of inefficiencies in the Philippine acquisition framework.

B. PROCESS MAPPING

This research utilized process mapping to create visual comparisons between the acquisition workflows of the United States and the Philippines. Process mapping enables researchers to identify system delays, redundant steps, and inefficiencies through its visual representation of activity sequences, decision points, and feedback mechanisms. The method reveals how authority is transferred through institutions from capability identification to sustainment, while highlighting the distinction between the U.S. MCA pathway, based on milestones, and the Philippines' RA 9184 and DSOM, which follow rule-based procedures. The research method enables both the documentation of complex procedures and the detection of structural weaknesses that impact the Philippine Navy submarine acquisition readiness.

1. U.S. Acquisition Process

a. Legal and Institutional Framework

The U.S. DAS operates through a full legal and institutional framework that combines statutory authority with regulatory oversight and policy direction. U.S. Code

Title 10 defines congressional oversight of military acquisition, and the Federal Acquisition Regulation (FAR) and Defense Federal Acquisition Regulation Supplement (DFARS) control all aspects of contracting procedures.

The DoD implements the system through the DoD 5000 series which includes DoDI 5000.01 and DoDI 5000.85 that establish the Adaptive Acquisition Framework (AAF). The U.S. system operates under the nickname "Big A," which includes three main components: DAS, JCIDS, and the Planning Programming Budgeting and Execution (PPBE) system. The institutions ensure that capability requirements align with resources and acquisition execution (Bautista & Zheng, 2023; DAU, n.d.-c; Mortlock, 2021).

b. Acquisition Process

The MCA pathway follows a milestone-based system, which starts with Materiel Development Decision (MDD) and continues through Milestone A for technology development before moving to Milestone B for engineering and manufacturing development and ending at Milestone C for production and deployment. The system follows a structured process that requires risk reduction and technology development, and oversight before starting full-rate production and sustainment. The Virginia-class submarine demonstrates how the United States achieves cost reduction through block upgrades and multi-year procurement contracts, which support industrial base stability (GAO, 2024; Knox et al., 2014; O'Rourke, 2023).

c. Workforce Capabilities

The U.S. acquisition workforce is highly professionalized under the Defense Acquisition Workforce Improvement Act (DAWIA). The Defense Acquisition University (DAU) trains personnel to develop specialized skills in systems engineering and logistics, as well as contracting and program management. The professionalization process allows for proper management of large-scale programs like the Virginia-class submarine, which handles performance and schedule, and cost requirements (Bautista & Zheng, 2023; Knox et al., 2014).

2. Philippines Acquisition Process

a. Legal and Institutional Framework

The Philippine acquisition framework is anchored on RA 9184, the Government Procurement Reform Act, which prescribes transparency and competitiveness in all government procurement, and RA 10349, the Revised AFP Modernization Act, which authorizes long-term defense modernization programs (Congress of the Philippines, 2012). The Defense System of Management (DSOM) implements four subsystems, which include the Defense Strategic Planning System (DSPS), Defense Capability Assessment and Planning System (DCAPS), Defense Acquisition System (DAS), and Defense Resource Management System (DRMS) (David & Taliaferro, 2019). The Philippines operates without a unified acquisition authority, which results in multiple institutional structures between the DND, the Government Procurement Policy Board, and the AFP (Bautista & Zheng, 2023; Philippine News Agency, 2019).

b. Acquisition Process

The Philippine process consists of four stages: planning, bidding, awarding, and contract implementation. RA 9184 requires competitive bidding for all procurement activities, and the winning bidder receives the contract through the Lowest Calculated Responsive Bid (LCRB) process (Bautista & Zheng, 2023). The Frigate Acquisition Project (FAP) used this process to obtain the Jose Rizal–class frigates through competitive bidding between shipbuilders until HHI won as the lowest responsive bidder (Naval Technology, 2020). The system encountered multiple technical specification approval delays and subsystem disagreements that proved its inflexibility when compared to the U.S. milestone-based MCA (Naval Technology, 2020; Wertheim, 2022).

c. Workforce Capabilities

The Philippine acquisition workforce is limited in size and professionalization. Officers and civilian staff assigned to DND and AFP modernization offices often serve dual roles with limited technical specialization (David & Taliaferro, 2019). While training programs exist, they lack the institutionalized rigor of DAWIA and DAU (Bautista & Zheng, 2023). The Philippines depends on foreign contractors and advisors

for technical integration because of this situation, as demonstrated by the Jose Rizal–class project, which needed foreign assistance to implement its combat management suite and radar and sonar systems (Wertheim, 2022).

The two systems present different fundamental approaches, as indicated by the process mapping results. The U.S. MCA pathway implements a milestone-based system that combines requirement validation with risk reduction and life-cycle sustainment from the beginning (DAU, n.d.-g). The Philippine acquisition process, as outlined in RA 9184 and DSOM, utilizes competitive bidding to achieve transparency and cost management; however, it fails to implement flexible approaches for handling intricate defense acquisition programs (David & Taliaferro, 2019). The process mapping demonstrates that the U.S. system employs repeated decision reviews to maintain capability–resource alignment; however, the Philippine system requires complete restarts after failed bids, resulting in prolonged delays and reduced efficiency. The observed gaps in Figure 12 serve as evidence for the RCA, which aims to determine the fundamental problems preventing submarine procurement readiness in the Philippines.

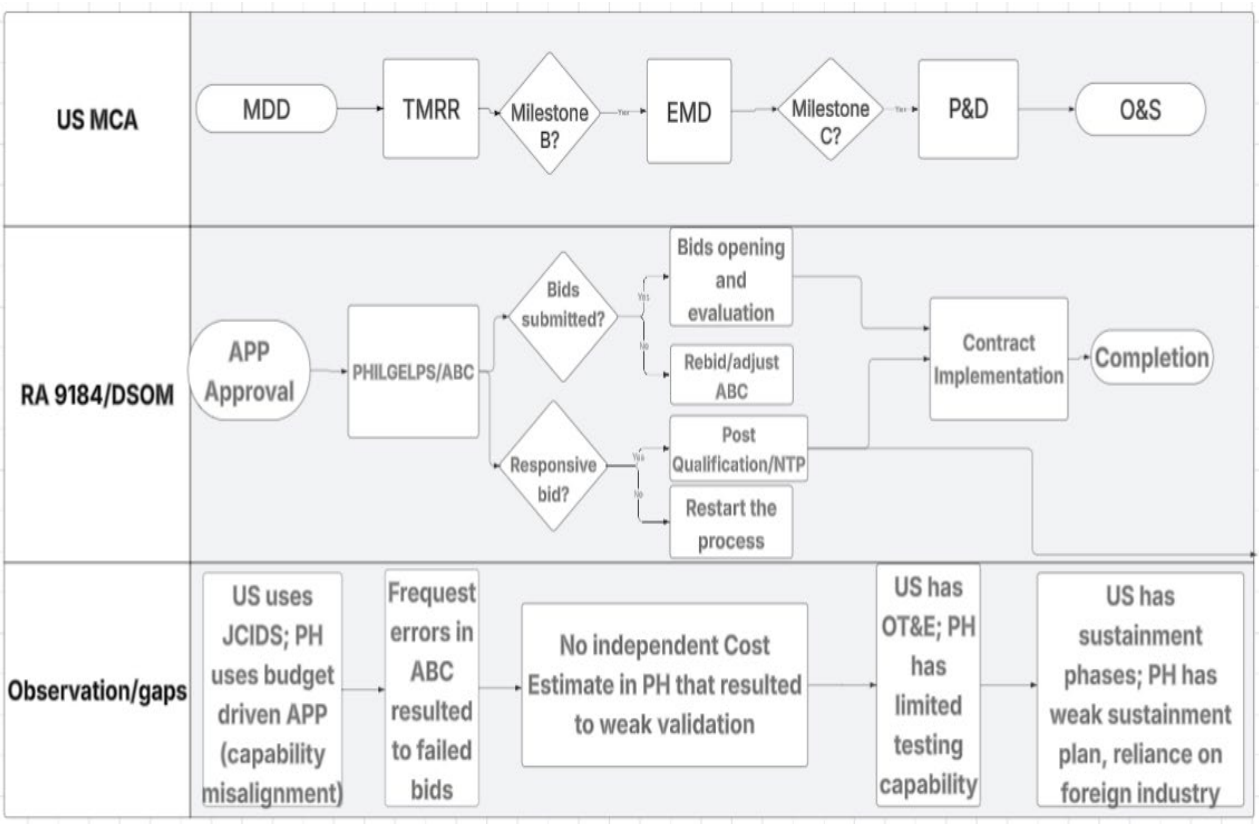

Figure 13. Process Mapping Model. Adapted from Bautista & Zheng (2023).

C. ROOT CAUSE ANALYSIS

This study applied RCA to identify the underlying factors contributing to inefficiencies in the Philippine DAS, particularly in the context of submarine acquisition. Root Cause Analysis (RCA) is a structured approach that identifies and addresses the underlying factors contributing to recurring organizational problems, rather than merely treating visible symptoms (Serrat, 2009). The fishbone diagram in Figure 13 visualizes six categories of root causes, such as workforce/oversight, organization, legal and regulatory framework, process, planning, and resources. These categories will be discussed further in the succeeding paragraph.

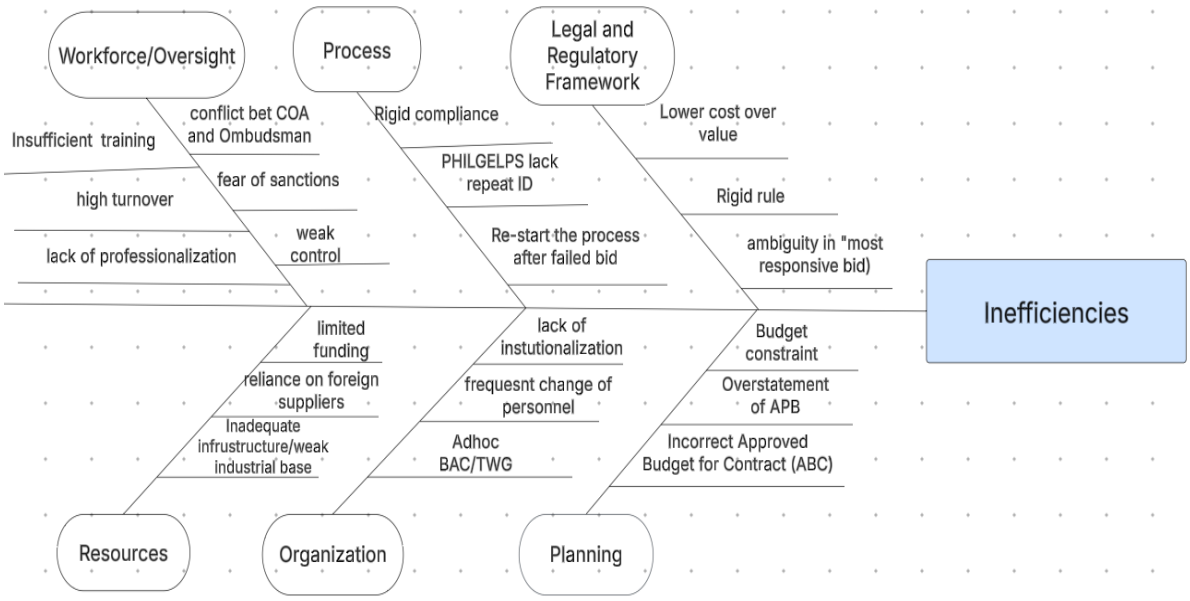

Figure 14. Fishbone Diagram. Adapted from Serrat (2009).

1. Legal and Regulatory Framework

The Philippine system operates under RA 9184 and RA 10349, which set requirements for both transparent and competitive acquisition practices (GPRA, 2003). The current regulations maintain strict rules that concentrate on LCRB instead of supporting life-cycle sustainment and risk reduction (Nisnisan & Salapa, 2024a). The inflexible method leads to performance issues when dealing with complex systems such as submarines because these systems require adaptable methods for milestone reviews and technical risk assessment (GAO, 2025a). The Philippine regulatory system does not include adaptive mechanisms that would enable milestone-based decisions and spiral development and long-term sustainment planning as the U.S. MCA framework does (Navarro & Tanghal, 2017).

2. Planning

The Philippine acquisition planning process fails to develop properly because it does not include capability assessments and sustainment requirements over time. The DSOM and DCAPS detect capability gaps, but they do not have effective systems to enforce proper alignment of capabilities (Bautista & Zheng, 2023). The project experienced specification changes and operational requirement confusion, and time

delays, which were similar to what happened during the Jose Rizal–class frigate project (Naval Technology, 2020). The Virginia-class submarine program followed established MDD and AoA procedures to establish fixed requirements before beginning procurement work (DAU, n.d.-g).

3. Process

The Philippine DAS operates through a linear four-step process, which includes planning, followed by bidding, then awarding, and finally contract implementation without any embedded decision milestones (David & Taliaferro, 2019). The system needs to restart from scratch whenever bidders fail to meet requirements, or when disputes occur, which causes project delays that negatively affect operational efficiency (Nisnisan & Salapa, 2024). The lowest-cost bidding system provides immediate financial benefits, but it fails to create sustainable operational success (Lopomo et al., 2023). On the other hand, the U.S. MCA has milestone-based reviews, block upgrades, and iterative assessments, which enable continuous risk reduction through flexible assessment methods (DAU, n.d.-g).

4. Organization

The Philippines operates without an acquisition authority that functions as a centralized body like the U.S. MDA. The responsibilities are fragmented among the DND, the AFP, and the Government Procurement Policy Board (Republic of the Philippines, 2003). The division of responsibilities between different agencies leads to multiple organizations handling the same issues, which results in confusing lines of authority and slow-moving government operations (Navarro & Tanghal, 2017). The defense enterprise suffers from poor decision-making and integration because it lacks a single acquisition chain of command (Habulan, 2002).

5. Workforce/Oversight

The Philippine acquisition workforce operates with insufficient professional development and dual roles, while showing weak abilities in systems engineering, program management, and logistics (Bautista & Zheng, 2023). Unlike the U.S. DAWIA

and the DAU system, the Philippines lacks an institutionalized training framework for acquisition professionals (OUDAS, 2017). The current oversight systems focus on compliance rather than performance results, which results in inadequate risk management, high foreign contractor involvement, and reduced capacity for independent operation of complex systems (Bautista & Zheng, 2023).

6. Resources

The Philippine defense acquisition process encounters problems because of its limited budgetary resources (Hellberg et al., n.d.). The GAA and multiple funding systems lead to unstable conditions that threaten the sustainability of programs. The absence of extended resource funding hinders industrial base development, which results in delivery delays and prevents the creation of stable supplier relationships (Ort, 2024). Unlike the U.S. Virginia-class program received backing through MYP contracts with stable budgets, and public–private partnerships, which built up the workforce and grew industrial capabilities (Congressional Research Service, 2023).

D. SUMMARY

This chapter examined the readiness of the Philippines to acquire submarines by looking closely at two very different programs: the U.S. Virginia-class submarine and the Philippine Navy's Jose Rizal–class frigates. The comparison showed a clear contrast. The Virginia-class program, built under the U.S. MCA framework, demonstrated how milestone reviews, block upgrades, and stable funding can keep a complex program on track for decades. Within this framework, the U.S. Navy applies the Two-Pass, Seven-Gate governance process, which synchronizes capability development, resource allocation, and acquisition decisions across all stakeholders (Department of the Navy, 2022). This "two passes" (SECNAVINST 5000.2G, Enclosure 16) provides iterative reviews between capability sponsors and acquisition executives to confirm operational and financial feasibility, while the "seven gates" (SECNAVINST 5000.2G, Enclosure 16) serve as decision checkpoints that validate technical maturity, cost realism, and schedule alignment throughout the submarine's development cycle. This governance mechanism ensures that the Virginia-class program maintains coherence between system design,

capability requirements, and funding stability across each successive block of construction (OUSDAS, 2020; Department of the Navy, 2022).

On the other hand, the Jose Rizal–class project, while a step forward for the Philippine Navy, revealed persistent issues in planning, system integration, and long-term sustainment. The process mapping made these differences even more visible. The U.S. system relies on milestone-based decisions that keep requirements, resources, and risks aligned at every stage of development. The Philippine system, however, is tied to the rigid rules of RA 9184 and the DSOM (Republic of the Philippines, 2003). The focus on competitive bidding and lowest cost selection promotes transparency, but it leaves little room for flexibility. As a result, projects often face delays, restarts, and missed opportunities, which is considered an approach poorly suited for the complexity of submarine acquisition.

To better understand these problems, RCA was applied. The RCA highlighted six recurring issues, such as rigid regulations, weak planning, inflexible processes, fragmented organizational responsibilities, a limited and lack of professionalism for the acquisition workforce, and unstable resource allocation. These factors explain why the Philippine acquisition system struggles with complex, high-end platforms.

Finally, the findings show that while the Philippines has made progress in surface fleet modernization, its current system is not yet ready to handle submarine acquisition without necessary reforms. The weaknesses identified in this chapter, particularly the lack of a synchronized decision mechanism like the Two-Pass, Seven-Gate model that set the stage for Chapter V**,** which offers recommendations and practical steps drawn from the U.S. MCA framework to help the Philippines build a credible and sustainable submarine capability.

V. RECOMMENDATIONS AND CONCLUSION

This chapter begins with a summary of the research questions and key findings that guided the study before proceeding to the recommendations and conclusion. The primary research question examined the extent to which the Philippine Navy is prepared to acquire and sustain a submarine capability when benchmarked against the U.S. MCA framework. The findings revealed that although the Philippine Navy has established fundamental acquisition structures through the DSOM, the system remains constrained by limited adaptability, fragmented authority, and the absence of milestone-based decision mechanisms essential for managing complex defense acquisitions (Republic of the Philippines, 2003). When compared with the U.S. MCA process, the study found notable deficiencies in technical risk management, workforce professionalization, and long-term sustainment integration, factors that limit the Philippine Navy's acquisition readiness and organizational maturity.

In addressing the secondary research questions, the analysis determined that the Philippine acquisition process shows partial alignment with the MCA framework in policy intent and governance structure, but differs significantly in implementation. While the U.S. model applies milestone-based reviews, iterative assessments, and continuous risk reduction strategies, the Philippine system continues to operate under rigid, compliance-focused procurement procedures defined by Republic Act 9184. These procedural constraints impede the timely execution of programs and limit opportunities for adaptive planning and performance-based management. Furthermore, institutional fragmentation among the DND, AFP, and the GPPB leads to overlapping mandates, inconsistent accountability, and slow decision-making processes (Nisnisan & Salapa, 2024).

This research also identified that the acquisition workforce faces challenges in professional development and technical specialization. Unlike the U.S. DAWIA and DAU system, the Philippines lacks an institutionalized training and certification framework for acquisition personnel (Bautista & Zheng, 2023). This deficiency reduces program management efficiency and hinders the independent operation of

technologically complex systems. Additionally, limited budgetary resources and short-term funding cycles under the GAA create unstable conditions that undermine program continuity, industrial base growth, and supplier relationships (Ort, 2024). In contrast, the U.S. Virginia-class submarine program demonstrates how multi-year procurement contracts, stable budgets, and public–private partnerships strengthen industrial capacity and workforce competence, which are best practices that the Philippine Navy could emulate (Congressional Research Service, 2023; Ort, 2024).

In general, the findings suggest that the Philippine defense acquisition system must evolve from a rule-based compliance approach toward a performance-oriented, milestone-driven process aligned with modern capability development principles. Reforms like the creation of a centralized acquisition authority, training programs, and integration of long-term sustainment planning are essential to improving efficiency and readiness. This synthesis of findings provides the analytical foundation for the subsequent recommendations and conclusions presented in the following section that can be used by future researchers.

A. RECOMMENDATION

The findings of this study highlight that while the Philippine defense acquisition system has made progress in certain areas, as seen most notably through the successful delivery of the Jose Rizal–class frigates, it remains structurally unprepared for the demands of a submarine program. The process of acquiring submarines operates under distinct principles that separate it from the acquisition of surface ships. Stealth technology development requires extensive planning, specialized personnel, and industrial facilities that can sustain stealth and propulsion systems. Drawing from the U.S. MCA framework and lessons from the Virginia-class program, the following recommendations are proposed.

1. Adopt a milestone-based acquisition model.

The Philippine system operates under a linear rule-based framework under RA 9184. The system shows two main advantages, such as transparent and responsible operation; however, its rigid structure forces all projects to begin anew whenever delays

or failed bids happen. This is impractical for complex defense platforms like undersea warfare. On the other hand, the MCA pathway employs a milestone review process—Milestones A, B, and C—that serves as decision gates for risk assessment and requirement updates before advancing to subsequent phases (OUSDAS, 2020; O'Rourke, 2023). The modification prepares the Philippine Navy to achieve operational flexibility and accelerate delivery times when acquiring its first submarine.

2. Stable requirement determination

The Jose Rizal-class frigate acquisition process faced ongoing problems because of repeated changes to technical requirements and disagreements about how different systems should work together. The front-end planning process requires additional development to address these problems. The unstable requirements for submarines create unacceptable problems because any small modification will break the design integration and increase costs. The DSOM and the DCAPS need to change to implement thorough requirement validation checks before starting procurement processes. The implementation of capability-based planning, which bases decisions on strategic priorities rather than immediate budget limitations, will help avoid the need for expensive changes during the middle of a project.

3. Centralized acquisition authority.

The contrast between the Philippine and U.S. frameworks lies chiefly in accountability. Whereas the U.S. designates a single Milestone Decision Authority (MDA), Philippine responsibilities are divided among several agencies, leading to slower coordination (Bautista & Zheng, 2023). The MDA possesses full authority to make acquisition decisions across all U.S. military branches. The Philippines distributes acquisition responsibilities between three government entities which include the DND, AFP and the Government Procurement Policy Board. The current system has multiple oversight bodies which result in delayed responses and duplicated work thus making it difficult to determine which entities are responsible. The DND needs to create a centralized acquisition authority to enhance decision-making operations and establish precise roles and organizational emphasis for the major capability program.

4. Professionalize the acquisition workforce.

Another major gap is the lack of a professionalized acquisition corps. Currently, the military officers and civilian staff involved in modernization programs often serve dual roles with little technical specialization, unlike U.S. counterparts trained under the DAWIA (Bautista & Zheng, 2023). To address this, the Philippines should institutionalize structured training programs through partnerships with allied acquisition institutions such as the U.S. DAU. A specialized workforce trained in systems engineering, contracting, logistics, and life-cycle management would allow the Philippines to gradually reduce dependence on foreign advisors and contractors, building true self-reliance in complex acquisition management.

5. Long-term funding

Resource instability persists as a primary obstacle. The GAA authorizes annual budgets suited for short-term expenditures rather than long-horizon capital programs such as submarine construction (GAO, 2024). Without stable resource commitments, contractors cannot invest in long-term partnerships, supply chains remain fragile, and the Navy cannot guarantee sustainment. A dedicated modernization fund or multi-year contracting authority should be institutionalized, like the U.S. multi-year procurement contracts that stabilized the Virginia-class submarine program (Congressional Research Service, 2023). This reform would send a clear signal to both domestic and international stakeholders that submarine acquisition is not a one-off project but a long-term national commitment.

6. Consider sustainment from the onset

The most important lesson from the Virginia-class program is that sustainment cannot be an afterthought. Submarines demand decades of maintenance, upgrades, and industrial support (Ort, 2024). For the Philippines, this means investing in logistics hubs, training pipelines, and domestic repair facilities before the first submarine even arrives. The selection of Subic Bay as a future sustainment center for the Jose Rizal–class frigates is a positive precedent; however, the scale of investment must be larger for submarines.

Early sustainment planning will reduce reliance on foreign shipyards, lower long-term costs, and ensure operational readiness.

B. CONCLUSION

1. Revisiting Research Objectives

This research investigated two main questions about submarine procurement readiness in the Philippines and the potential use of the U.S. MCA framework benchmarking to determine readiness. The analysis shows that readiness has not been reached, but the direction to get there is established. The Philippines will achieve better results through MCA-like implementation, particularly on milestone-based reviews, life-cycle sustainment planning, and workforce professionalization. The proposed changes would boost submarine readiness while improving the overall Philippine defense acquisition system through enhanced agility, accountability, and sustainability.

2. Shortfalls

The research is limited by various established limitations, including access to classified program documents, which restrict the analysis to open-source and secondary literature, potentially missing the full scope of submarine procurement planning. The comparative method provides useful methods, yet it fails to consider how Philippine governance operates within its special political, economic, and cultural system, which impacts actual implementation. The research duration extended from the year 2000 until now, but future modifications to strategy or budget priorities may reduce the value of existing findings.

3. Follow-up Research

Future research needs to expand on this study through the development of submarine acquisition cost models, the application of a simulation approach like Monte Carlo simulation, the assessment of the Philippines' capability in developing an industrial base, and consideration for the geopolitical environment that creates changes in both alliance relationships and defense capabilities in the South China Sea region.

C. SUMMARY

This study indicated that the Philippines will not succeed in its first submarine procurement unless it undergoes necessary reforms. The Philippines needs to implement changes to build institutional capacity and operational readiness for success, which include milestone-based reviews, enhanced planning, centralized authority, professionalized workforce, stable funding, and sustainment priority.

This research confirms that the Philippine submarine acquisition represents a test for the nation to transform its defense procurement system and demonstrate maritime defense capabilities. The U.S. MCA framework delivers essential guidance for this transition process, although multiple challenges need to be overcome.

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