2027 Sponsored Research Topics

The Acquisition Research Program (ARP) of the Department of Acquisition, Finance and Manpower at the Naval Postgraduate School accepts research topics from potential sponsors. These topics have been compiled to assist graduate students in locating topics for their research projects.

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T27-032	**Topic: Operationalizing Contracting at the Tactical Edge: Codifying the LSCO Operating Concept for 51C Expeditionary Detachments** **Topic Title:** Operationalizing Contracting at the Tactical Edge: Developing the Large-Scale Combat Operations (LSCO) Operating Concept for Forward Contracting Elements **Overview:** Current joint and service operational contract support doctrine, notably Joint Publication 4-10 (*Operational Contract Support*), relies on strategic and operational assumptions conceived during sustained counter-insurgency and stabilized contingency operations. Under legacy frameworks, theater sustainment planning anticipated massing large contracting footprints—often deploying hundreds of Military Occupational Specialty (MOS) 51C contracting professionals into centralized, secure Division Support Areas and Theater Support Commands. In contested Large-Scale Combat Operations against near-peer adversaries, these centralized rear nodes will be subject to persistent long-range precision fires, electromagnetic jamming, and disrupted lines of communication, rendering large, stationary contracting footprints vulnerable and tactically untenable. Modern LSCO demands distributed, agile, and survivable operational configurations. ACC requires an operationalized concept that employs agile two- to three-person Forward Contracting Elements (FCEs) operating at the tactical edge (e.g., Aerial Ports of Debarkation [APODs], Sea Ports of Debarkation [SPODs], and forward convoy support centers). These forward teams face acute operational frictions: they lack organic, standardized secure communications suites (often forcing reliance on improvised host-nation SIM cards or tenuous integration into tactical unit mesh networks), operate under ambiguous center-of-gravity battlefield positioning, and must balance simplified acquisition thresholds against immediate operational imperatives. This research project will conduct a rigorous operational and doctrinal analysis to draft and refine ACC's tactical LSCO Operating Concept. The resulting study will define the tactical mission parameters, communications architecture, mission-essential command relationships (OPCON/TACON boundaries with supported brigade combat teams), and legal delegations necessary to empower forward contracting officers to deliver rapid commercial combat effects in highly contested environments.

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	Main Research Question: What operational doctrine, command architecture, and tactical operating concept must Army Contracting Command establish to field agile, dispersed 2–3 person Forward Contracting Elements capable of delivering continuous contracting effects at the tactical edge in a contested LSCO environment? **Secondary Research Questions:** • How must joint doctrine (JP 4-10) and Army operating doctrine evolve to delineate "must-do" life-support and combat-enabling contracting functions from rear-echelon administrative actions during high-intensity conflict? • What communications and information systems architecture—balancing tactical cybersecurity with expeditionary agility—is required for forward teams operating in degraded, denied, or intermittently connected environments? • What delegated contracting authorities, simplified warrant thresholds, and risk-acceptance protocols must be pre-authorized to allow junior 51C officers and NCOs to execute emergency commercial support at points of need? **ACC Sponsor POCs:** • **Operational Lead (G-3):** COL Shawn O. Peynado, Director of Operations (G-2/3/5/7T), ACC HQ (shawn.o.peynado.mil@army.mil) • **Action Lead:** G3 Operations Directorate (LTC Binkinz / MAJ Mararo / MSG Echols) • **Legal Advisor:** MAJ Shannon J. Fields, Operational Contract Law Division, ACC HQ (shannon.j.fields6.mil@army.mil) • **NPS POC:** Dr. Rene G. Rendon (rgrendon@nps.edu)
T27-031	**Topic: Quantifying and Communicating Acquisition Risk: Developing an Analytical Framework Beyond the "Always Get the Mission Done" Paradigm.** **Topic Title:** Quantifying and Communicating Operational Risk in Army Contracting: Transitioning from Anecdotal Narrative to Data-Driven Operational Vignettes **Overview:** For decades, the Army Contracting Command has sustained a deep institutional culture centered on "always getting the mission done," absorbing severe resource cuts, hiring freezes, and workload surges through unrecorded civilian compensatory time, deferred contract administration, and ad-hoc reprioritization. While demonstrating commendable resilience, this organizational behavior has inadvertently masked severe resource distress from senior Army leadership and the Portfolio Acquisition Executives (PAEs). When enterprise leadership reviews performance via traditional green/amber/red status charts that display only successful obligation milestones, the systemic operational risks generated by reduced staffing remain completely invisible. Recent fiscal realities—including an 18% reduction in civilian authorizations (~900 personnel), strict 96% onboard strength caps mandated by Army Materiel Command, and projected base budget reductions—make continued reliance on informal workforce subsidization impossible. The command must transition from qualitative complaints of burnout to precise, legally defensible, and empirically quantified operational risk vignettes. Decision-makers must understand the direct correlation between staffing deficits and real-world operational degradation, such as industrial ammunition plant halts (e.g., the Radford AAP 13-day shutdown), lapsed facility operations and maintenance, security guard vulnerabilities, and

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	delayed weapon system upgrades. This research will design a standardized, repeatable data-analytics methodology for ACC that links contracting capacity metrics directly to tactical and strategic readiness impacts. The project will examine historical contract throughput, lead times, post-award administrative compromises, and customer mission failure points to provide senior Army leadership with verifiable "decision space" rather than binary administrative summaries. **Main Research Question:** How can Army Contracting Command develop and institutionalize an empirical, data-driven framework that quantifies how contracting resource deficits translate into specific operational readiness risks for supported combat formations? **Secondary Research Questions:** • What quantitative and qualitative metrics best establish a direct causal link between contracting personnel cuts and mission-partner delivery failures, safety incidents, or supply chain stoppages? • How can ACC transition traditional Procurement Management Reviews (PMRs) into strategic Procurement Enterprise Reviews (PERs) that assess overall organizational health, risk exposure, and data trends rather than procedural checklist compliance? • What strategic communication model and visualization format will most effectively convey these contracting and fiscal risk trade-offs to senior Army resourcing authorities (ASA[ALT], AMC, and HQDA)? **ACC Sponsor POCs:** • **Operational Lead (G-3 / CONOPS):** COL Shawn O. Peynado, Director of Operations (shawn.o.peynado.mil@army.mil) • **Action Lead:** CONOPS (M. Sanner) • **Legal Advisor:** Robert E. Teutsch, Jr., Chief Counsel, ACC HQ (robert.e.teutsch.civ@army.mil) / MAJ Shannon J. Fields (shannon.j.fields6.mil@army.mil) • **NPS POC:** Dr. Rene G. Rendon (rgrendon@nps.edu)
T27-030	**Topic: Mitigating the "Downstream Journeyman Gap": Strategic Human Capital Reform and Accelerated 51C/1102 Pipeline Development** **Topic Title:** Mitigating the Downstream Journeyman Gap: Structural Talent Management and Accelerated Certification Pathways for the Army Acquisition Workforce **Overview:** The defense contracting workforce is approaching a structural demographic cliff. Due to successive fiscal constraints, AMC attrition caps, and a multi-year freeze on entry-level intern hiring across FY25 and FY26, ACC faces a severe projected shortage of 600 to 900 GS-1102 journeyman-level contract specialists between FY28 and FY30. Because journeyman competency historically requires three to five years of developmental pipeline training, the current inability to seed entry-level positions creates an inevitable operational deficit that coincides precisely with projected increases in complex weapon systems fielding and munitions replenishment. Compounding this civilian human capital deficit are structural rigidities in the military (MOS 51C) developmental model. Under current practices, newly re-branched 51C Non-Commissioned Officers and Officers are subject to a mandatory 12-month on-the-job training

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	(OJT) waiting period prior to taking their formal contracting certification examination. Field data indicates this prolonged latency period produces minimal improvement in exam pass rates because first-year localized OJT tasks rarely align with comprehensive schoolhouse certification curricula. Furthermore, decentralized training produces a severe "location lottery," where professional competency varies drastically based on the specific installation or contracting center to which a candidate is assigned. This research project will investigate systemic human capital strategies to bypass the impending workforce gap. The study will evaluate the feasibility and projected efficacy of ACC's newly proposed "ACC University" schoolhouse model, examine immediate post-course certification testing at the schoolhouse, assess the integration of Active Duty for Operational Support (ADOS) Reserve personnel, and develop organizational succession pipelines to prepare GS-14/15 and senior military leaders for executive portfolio management. **Main Research Question:** What strategic workforce reforms and accelerated developmental pipelines can Army Contracting Command implement to mitigate the projected 600–900 journeyman-level civilian shortfall and optimize military 51C operational readiness in an era of capped manning? **Secondary Research Questions:** • What are the measurable performance and readiness outcomes of shifting 51C contracting certification examinations directly into the foundational schoolhouse versus maintaining the legacy 12-month field OJT requirement? • How can an enterprise-wide "schoolhouse model" (ACC University) be structured to eliminate the geographic "location lottery" and standardize foundational contracting competencies across distributed centers? • What legal, regulatory, and budgetary mechanisms (such as reimbursable ADOS tours, direct-hire authorities, and targeted retention incentives) offer the highest return on investment for bridging civilian personnel shortfalls? **ACC Sponsor POCs:** • **Workforce & Training Lead (G-1 / G-3T):** LTC Baxter, Training Directorate (G-3T) / Ms. Ghee (G-1) • **NCO Professionalism Lead (G-35):** SFC Sieck, Master Gunner / Operations • **Legal Advisor:** MAJ Shannon J. Fields, Operational Contract Law Division (shannon.j.fields6.mil@army.mil) • **NPS POC:** Dr. Rene G. Rendon (rgrendon@nps.edu
T27-029	**Topic: Governance and Legal Efficacy of Acquisition Realignment: Enforcing the "Pay-to-Play" Mandate and Delegated HCA Authorities** **Topic Title:** Acquisition Governance Under Portfolio Realignment: Assessing the Operational and Legal Impact of the "Pay-to-Play" Mandate and Delegated Head of Contracting Activity Authorities **Overview:** In response to broader Army acquisition modernization directives from the Army Acquisition Executive, the Army is restructuring historically siloed program offices into unified Portfolio Acquisition Executive (PAE) constructs. This realignment seeks to integrate system developers, resource managers, and contracting execution authorities early in the program

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	life-cycle. Within ACC, this shift has affected over 1,100 personnel reassigned across operational and administrative command lines, precipitating complex inter-organizational friction regarding fiscal responsibility, workload balancing, and legal liability. A primary flashpoint is the financing of dedicated contracting support billets. Previously, ACC frequently absorbed shortfalls when mission partners transferred funds below fully burdened labor costs (e.g., transfers funded at only 70%), using ACC Operations and Maintenance, Army (OMA) funds to subsidize external programmatic support. Facing severe fiscal tightening, ACC leadership has initiated a strict "Pay-to-Play" policy: ACC will no longer use internal OMA funds to backfill unfunded reimbursable customer requirements, and mission partners (such as PEO EIS or aviation programs) who withdraw funding for realigned billets will face immediate cessation of dedicated contracting support. Concurrently, the permanent delegation of Head of Contracting Activity (HCA) authority down to center scope levels and the drastic elimination of over 72% of AFARS clauses represent unprecedented decentralization intended to empower Contracting Officers. This research will conduct an in-depth policy, economic, and legal case study on the execution of the "Pay-to-Play" mandate and decentralized HCA delegations. The project will analyze inter-agency Memorandum of Agreements (MOAs), Economy Act orders, customer relationship dynamics, and contracting velocity metrics across realigned centers to evaluate whether decentralization has accelerated delivery timelines without compromising fiscal integrity or statutory compliance. **Main Research Question:** How does the enforcement of ACC's "Pay-to-Play" reimbursable resourcing mandate and the permanent delegation of Head of Contracting Activity (HCA) authorities impact inter-organizational acquisition performance, fiscal compliance, and acquisition lead times? **Secondary Research Questions:** • What are the legal, statutory, and contractual implications of terminating procurement support to non-compliant mission partners under Economy Act and reimbursable support frameworks? • How has the decentralization of HCA authority and the elimination of 72+% of AFARS clauses impacted contracting officer decision-making speed, warrant thresholds, and bid protest vulnerability? • What governance models and workload-balancing metrics should ACC establish to objectively reallocate contracting personnel from unfunded mission partners to priority, fully reimbursed programs? • **ACC Sponsor POCs:** • **Operational Lead (CMD HQ / CONOPS / G-8):** LTC / R. Williams (G-8/CONOPS) • **Policy Lead:** M. Drayton / J. Bunch (CONOPS) • **Legal Advisor:** Robert E. Teutsch, Jr., Chief Counsel (robert.e.teutsch.civ@army.mil) / MAJ Shannon J. Fields (shannon.j.fields6.mil@army.mil) • **NPS POC:** Dr. Rene G. Rendon (rgrendon@nps.edu)
T27-028	**Topic: Legal and Technological Defense in Algorithmic Procurement: Countering Automated Bid Protests and Operationalizing AI Acquisition** **Topic Title:** Algorithmic Warfare in Federal Procurement: Defending Against AI-Generated

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	Bid Protests and Establishing Legal Defensibility in AI-Assisted Source Selection **Overview:** Emerging artificial intelligence platforms present a profound dual-use paradigm for the Department of Defense contracting enterprise. On the capability front, the implementation of automated requirements generation tools (such as ArmyMAX for drafting Performance Work Statements), market research copilots, and pre-qualified transactional frameworks (such as the Tradewinds Solutions Marketplace) promises to radically compress Procurement Acquisition Lead Time (PALT). However, the parallel realization of the Army Contract Writing System (ACWS) has faced budgetary and integration friction, complicating enterprise data standardization. Simultaneously, the commercial defense industrial base is leveraging generative AI and legal Large Language Models (LLMs) to alter the procurement grievance landscape. Industry partners and commercial aggregators possess the capability to deploy automated legal bots that ingest published solicitations, identify minor drafting deviations, and instantly generate a significant number of bid protests and formal agency inquiries. Such algorithmic litigation tactics threaten to paralyze already resource-strained ACC legal teams and contracting directorates, weaponizing the statutory Competition in Contracting Act (CICA) stay mechanisms to delay program awards and exploit settlement negotiations. This research project will investigate the legal, procedural, and technological countermeasures necessary to protect the Army procurement enterprise against adversarial and exploitative AI filings while ensuring internal AI integration remains legally defensible. The study will assess the necessity and operational boundaries of the "Human-in-the-Loop" doctrine for source selections, review legal precedents at the Government Accountability Office (GAO) and Court of Federal Claims (COFC), and propose regulatory revisions to discourage frivolous automated protests. **Main Research Question:** What legal doctrines, procurement governance policies, and technical screening frameworks must the Army Contracting Command establish to defend against high-volume, AI-generated bid protests while ensuring government adoption of generative contracting tools remains legally compliant? **Secondary Research Questions:** • What institutional mechanisms and statutory reforms can be pursued to prevent commercial AI-driven bot protests from systematically exploiting mandatory CICA stay provisions? • To what extent does the integration of AI tools in requirements definition (PWS development) and price reasonableness determinations withstand legal scrutiny under GAO bid protest standards? • How can ACC Operational Contract Law and Procurement Systems divisions establish standardized validation protocols that verify the integrity and legal defensibility of "Human-in-the-Loop" source selections? **ACC Sponsor POCs:** • **Legal Lead:** Robert E. Teutsch, Jr., Chief Counsel (robert.e.teutsch.civ@army.mil) / MAJ Shannon J. Fields, Operational Contract Law Division (shannon.j.fields6.mil@army.mil) • **Systems / CONOPS Lead:** J. Woods (ACWS Lead) / CW2 Syringe (G6) • **Operations Lead (G-3):** COL Shawn O. Peynado, Director of Operations (shawn.o.peynado.mil@army.mil)

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	• **NPS POC:** Dr. Rene G. Rendon (rgrendon@nps.edu)
T27-027	**Topic: Commercial Intelligence Preparation of the Battlefield: Operationalizing Commercial Support Environments and Rapid Autonomy Marketplaces** **Topic Title:** Commercial Intelligence Preparation of the Operational Environment: Evaluating the Integration of the CSE Dashboard and E-Commerce Marketplaces for Theater Warfighting Capabilities **Overview:** In contested geographic theaters such as USINDOPACOM and USEUCOM, logistics and sustainment operations depend heavily on the rapid, secure mobilization of local commercial resources. Historically, operational contracting market research has been localized, transactional, and conducted ad-hoc after units deploy. To overcome this limitation, the 411th Contracting Brigade initiated the Commercial Support Environment (CSE) dashboard—an offline-capable, unclassified operational intelligence platform designed to conduct commercial "intelligence preparation of the battlefield" across key hubs, ports, and airfields throughout the Pacific AOR. Parallel to the CSE platform, the command has operationalized agile commercial storefronts, notably the Unmanned Aerial Systems (UAS) Marketplace (accessible via RAMBO—Rapid Marketplace for Order). Utilizing pre-vetted vendors from DoD "Blue Lists" and Basic Ordering Agreements (BOAs), the UAS Marketplace aims to compress transaction cycle times to five days, addressing the severe economic disparity between domestic production costs ($\sim 14{,}000 per drone$) and expendable battlefield threats (814 price-per-kill). However, enterprise-wide adoption among frontline operational commanders and tactical CSBs remains severely lagging due to low institutional awareness, entrenched reliance on legacy requisition channels, and supply chain foreign-ownership risks. This research will evaluate the operational utility, technical integration, and adoption barriers of ACC's advanced commercial tools. The study will assess how the CSE tool can integrate with broader Army command systems (e.g., Project Linchpin, MAVEN, Vantage) and propose a unified concept of operations to transition commercial marketplace capabilities from experimental prototypes into standard operational sustainment doctrine. **Main Research Question:** How can Army Contracting Command institutionalize commercial market visualization platforms (such as the 411th CSE Dashboard) and e-commerce acquisition models (such as the UAS Marketplace) into standard combatant command operational planning and frontline tactical execution? **Secondary Research Questions:** • What are the primary cultural, organizational, and technical barriers preventing Battalion- and Brigade-level operational users from adopting decentralized e-commerce acquisition platforms like the UAS Marketplace? • How can market-sensing platforms like the CSE dashboard effectively detect secondary and tertiary foreign supply chain dependencies (e.g., adversary ownership of regional port facilities or rare-earth supplies) before contract execution? • What data interoperability standards and automated APIs are required to link tactical contracting dashboards directly into enterprise common operational pictures such as

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	MAVEN and Vantage? • **ACC Sponsor POCs:** • **Operational Leads (G-3 / CONOPS):** LTC Binkinz / LTC Hammond (UAS Marketplace / CONOPS) • **Theater Intelligence / CSE Leads:** (ACC-RSA) • **Legal Advisor:** MAJ Shannon J. Fields (shannon.j.fields6.mil@army.mil) • **NPS POC:** Dr. Rene G. Rendon (rgrendon@nps.edu
T27-026	**Topic: Leveraging the Army Acquisition NCO Corps in a Technology-Enabled and Resource Constrained Environment.** **Overview:** With more focus on technology in a fast-paced and resource constrained environment, are we properly leveraging the knowledge, skills, and behaviors we need while providing training opportunities, maximizing efficiencies with our NCOs Corps within acquisitions or are there areas where we should look into? **Main Research Question:** Conduct a case study on the proper utilization of NCOs Staff Sergeants through Sergeants Major at echelon within ACC. **NPS POC**: Dr. Rene G. Rendon rgrendon@nps.edu **ACC POC**: Robert E. Teutsch, Jr. Chief Counsel US Army Contracting Command 4505 Martin Road Redstone Arsenal, AL 35898 E-mail: Robert.E.Teutsch.civ@army.mil Tel: (256) 955-7910 Cell: (256) 513-2381
T27-025	**Topic: Assessment of the INDOPACOM AOR Commercial Support Environment to Support Warfighting Capabilities.** **Overview:** United States Indo-Pacific Command (USINDOPACOM) is one of six geographic combatant commands defined by the Department of Defense's Unified Command Plan (UCP). As a geographic combatant command, USINDOPACOM uses and integrates United States Army, Navy, Air Force, and Marine Corps forces within the USINDOPACOM area of responsibility (AOR) to achieve U.S. national security objectives while protecting national interests. The region is a vital driver of the global economy and includes the world's busiest international sea lanes and nine of the ten largest ports. The Asia-Pacific is also a heavily militarized region, with seven of the world's ten largest standing militaries and five of the world's declared nuclear nations. Given these conditions, the strategic complexity facing the region is unique. USINDOPACOM faces a range of challenges, including an increasingly belligerent North Korea that is sharing its increasingly capable missile technology with Iran, a growing China that is challenging international rules and norms, and a revanchist Russia that is increasingly active in the Pacific with a provocative military posture. However, USINDOPACOM is well-

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	equipped to address these challenges, ensuring the safety and security of the Indo-Pacific region. While territorial disputes, maritime tensions, strategic competition, regional stability, and a delicate balance of power are some of the geopolitical security concerns, non-traditional threats like disaster management (most recently, COVID-19), climate change, pollution, and natural resource depletion compromise the commercial market. **Main Research Question:** What are the best indicators/measures to determine the strength of the commercial support environment, by warfighting function, in the INDOPACOM AOR. In your research, utilize the Federal Procurement Data System Next Generation (FPDS-NG) to gather spending data to determine theater estimates of known capacity and access through SAM.gov or USAspending.gov. **NPS POC**: Dr. Rene G. Rendon rgrendon@nps.edu **ACC POC**: Robert E. Teutsch, Jr. Chief Counsel US Army Contracting Command 4505 Martin Road Redstone Arsenal, AL 35898 E-mail: Robert.E.Teutsch.civ@army.mil Tel: (256) 955-7910 Cell: (256) 513-2381
T27-024	**Topic: Predicting the Accuracy of Cost, Schedule, and Performance Projections** **Overview:** The purpose of this research project is to outline a plan for predicting the accuracy of cost, schedule, and performance projections for acquisition programs. The proposed approach involves combining acquisition, requirements, and budget documents to develop a comprehensive understanding of the project and its expected outcomes. The application of various machine learning techniques to the extracted data will be considered to identify patterns and relationships that can predict the accuracy of the projections. **Main Research Question:** How can machine learning techniques be applied to acquisition, requirements, and budget documents to identify patterns and relationships for predicting the accuracy of the projections? **Secondary Questions:** TBD **NPS POC:** Dr. Rene G. Rendon rgrendon@nps.edu.

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T27-023	**Topic: Rapid De-obligation Thresholds for Unliquidated Obligations to Return Buying Power** **Background:** NAVSEA Comptroller (SEA 01), is engaged in analysis of unliquidated contract obligations. Unliquidated obligations occur when contractors billed costs are less than the amount of money obligated on a contract. SEA 01 has identified unliquidated obligations (ULOs) on general fund NAVSEA headquarters contracts greater than 365 days without billing, totaling $20.4B. These funds could be repurposed for other NAVSEA priorities if the funding can be de-obligated before funds expire. Although a significant amount of ULOs exists, the funds are spread over 26,751 contract actions. Existing processes to remove available funds from contracts require extensive work and time from multiple NAVSEA directorates, including contract modification. The time, manpower costs, and opportunity costs associated with program financial manager, comptroller personnel, contracting specialists, and contracting officers exceeds the value of returned funds. ASN (FM&C) and DASN(P) authorized comptrollers and contracting officers to utilize an accelerated de-obligation process whereby funds are removed from an obligated status in Navy Enterprise Resource Planning (NERP) without an associated contract modification. In order to execute this process SEA 01 and SEA 02 (contracts) needs greater fidelity on the risks associated with establishing a dormant billing time and dollar value threshold for implementing the accelerated de-obligation process. SEA 01 has access to all billing information associated with the Navy financial system of record, NERP, but lacks bandwidth and personnel with the skillsets to analyze the data and develop the criteria for application of the accelerated de-obligation processes. The overall intent is to automate the process after sufficient risk evaluation, acceptance, or mitigation. **Primary Research Questions:** • What is the correct time period, without billing, before an ULO account is considered available for accelerated de-obligation? SEA 01 assumes 365 days. Does the time period change based on the appropriation used? • What dollar value can SEA 01 de-obligate with a 95% confidence factor that no additional billing will occur? How does the dollar value change as confidence factor changes? Are the confidence intervals different across appropriations? • Can a repeatable process be established where SEA 01 personnel can populate an analytical tool, on an annual basis, to re-assess the time period and dollar value for accelerated de-obligation? **Topic Sponsor:** NAVSEA **Keywords:** unliquidated; obligations; buying power; rapid de-obligation **Resources:** NERP unliquidated obligation data and access to the SEA 01 data analytics team. **POC:** NAVSEA Deputy Comptroller, CDR Chris Kading, 202-944-0819, or christopher.r.kading.mil@us.navy.mil will assist in refining problem scope and access required personnel and resources.

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T27-022	**Topic: Reduce burden of dormant account processing through the Navy DAR-Q and CERMC process.** **Background:** The Department of the Navy (DON) Dormant Account Review Quarterly (DAR-Q) replaced the Triannual Review in August 2019. DAR-Q serves as a quality control mechanism, improves the Department's ability to execute available appropriations before expiration (improve buying power), and ensures open obligations are valid and support accurate financial and budgetary reporting. At the same time, DON established the Commanders Enterprise Resource Management Council (CERMC), which includes dormant accounts and expiring appropriations similar to DAR-Q. **Primary Research Questions:** Research questions may be broken up into multiple projects. • Do process inefficiencies exist within the Navy DAR-Q and CERMC process which can be modified, eliminated, or risk accepted in order to streamline DAR-Q and CERMC, reduce stakeholder workload and achieve better results? • If process inefficiencies exist what can NAVSEA and Navy do to improve the process and achieve better results? • Are there innovative funding strategies which may reduce open obligations, preventing them from contributing to DAR-Q and CERMC process reviews? **Suggested Deliverables:** • Complete end to end DAR-Q and CERMC process map, indicating which stakeholders and systems are involved in the process. • Recommendations for NAVSEA internal process changes to align DAR-Q and CERMC. • Recommendations for external FMB process changes to align DAR-Q and CERMC. **Topic Sponsor:** NAVSEA **Keywords:** DAR-Q, dormant, CERMC, unobligated balances, better buying power, better results **Resources:** NAVSEA Comptroller and financial management staff, relevant instructions, guidance, and existing processes, associated data, and most other information required during project execution. NAVSEA is willing to fund student travel if required. **POC:** NAVSEA Deputy Comptroller, CDR Chris Kading, 202-944-0819, or christopher.r.kading.mil@us.navy.mil will assist in refining problem scope and access required personnel and resources.
T27-021	**Topic: Develop FRC Enterprise Acquisition and Procurement Strategy using Industry Best Practices and Best Practices Identified at the Individual FRCs** **Issue:** Historically and currently the FRCs have been managed as separate entities with broad overarching guidance provided via NAVAIR & COMFRC in regards to requirements generation and fulfillment for non-repair part items. **Background:** The development of the COMFRC business plan and recent changes within COMFRC Supply, Acquisition and Procurement groups have set the environment to achieve standardization across the enterprise. The FRCs use a myriad purchasing vehicles as an enterprise and as autonomous entities. There is potential for realizing cost avoidance

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	resulting in lower rates and improved Fleet buying power by increasing standardization and creating/identifying FRC enterprise purchasing vehicles. The consolidating requirements and the utilization of Enterprise vehicles should reduce mark-ups and improve pricing while improving speed to need. **Action items:** Identify Industry best practices and those currently being used by the FRCs to determine areas ripe for standardization that will help the FRCs to lower rates and improved Fleet buying power. • Evaluate and break down FRCs current procurement practices by commodity spend and list of vehicles currently being used by each site to fill current requirements. • Visit FRCSW, SE and East and evaluate purchasing vehicle usage, practices and budgetary alignment. • Call out areas to COMFRC Leadership that need immediate evaluation if identified as areas for potential waste or fraud. • Identify and benchmark industry best practices in regard to centralized contract actions, standardized requirement generation and fulfillment. • Recommendations should improve contract actions to time of need and improve flexibility, agility and reduce cost. **COMFRC Supply Group POCs:** CAPT Dale Haney, dale.a.haney.mil@us.navy.mil (301) 342-1440 Mr. Jack Prpich, jack.prpich.civ@us.navy.mil (301) 757-3055
T27-020	**Topic: Fuel Logistics Requirements to Support Expeditionary Advanced Base Ops in INDOPACOM AOR** **Overview:** The study will highlight what capabilities are needed to support naval surface combatants and expeditionary marine forces under the new Expeditionary Advanced Base Ops (EABO) structure. This study will model and examine the current state of USN and MSC logistics capabilities in relation to their projected capability to support the EABO paradigm to assess whether current logistics capabilities are sufficient to support combat operations in the INDOPACOM AOR. This effort will use demand and logistics modeling to identify any capability gaps and produce preliminary systems level requirements for additional logistics assets needed to support EABO and surface combatants. For example, it is anticipated that there is an unmet need for bulk ship-to-shore fuel transfer. This study will build upon prior work examining the benefits of switching to a single fuel operating concept in NAVEUR AOR and will further explore the benefits of single fuel (JP-5) in INDOPACOM. **Topic Sponsor: OPNAV N4** **Keywords:** fuel supply chain, contested environment, JP-5, F-76, single fuel concept, expeditionary advanced base operations, EABO **NPS POC:** Prof. Geraldo Ferrer, 831-656-3290 gferrer@nps.edu

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T27-19	**Topic: Analysis of DoD Ammunition Manufacturing Industry and Supply Chain** **Overview:** The U.S. Army is the lead agent for ammunition production for the Department of Defense (DOD). It accomplishes this through seven plants (1 mothballed) that are Government Owned / Contractor Operated (GOCO) facilities. They are single/sole source plants meaning that each plant is run by one contractor and produces one category within the broader ammunition supply chain (Explosives vs. Casings etc). This industrial policy has made the ammunition supply chain highly rigid, vulnerable to disruption and with a stagnating workforce operating in "state of the art as of 1952" plants in need of modernization. This challenge is compounded by the U.S. Army leveraging ammunition Procurement accounts for other platforms (OMFV, Chinook, etc) as well as O&M requirements to include travel. The net effect is the DOD receives ~70% of the ammunition requirement that Congress appropriates every year. The U.S. Army would benefit from student research on this challenge in general and specific problems that arise from maintaining ammunition plant resilience that aligns with the NSS and NDS objectives as well as DOD industrial policy. **Main Research Question: TBD** **Secondary Questions: TBD** **NPS POC:** Dr. Rene G. Rendon rgrendon@nps.edu
T27-18	**Topic: Portfolio Management and Coordinated Acquisition Decision Making** **Overview:** In the current environment, a Major Defense Acquisition Program (MDAP) navigates three insufficiently (or poorly) coordinated systems to develop requirements, secure funding, and plan acquisition. Each of these three major DoD decision systems have processes with separate decision makers and timelines, that make it difficult to deliver the right capabilities in time to meet needs and within budget constraints. The same basic process is also applied to defense business systems (DBSs), which are burdened with additional oversight and approval processes such as business process re-engineering, enterprise architecture, and an Investment Review Board. Within the private sector, portfolio management has long been standard practice to consolidate decision making and deliver better capabilities faster, whether for hardware or software. **Research Objective:** DoD is beginning to modernize business processes to reflect concepts of portfolio management, but is it moving in the right direction? Research may focus on MDAPs, DBSs, or the intersection between the two. Topic should be directed by student's area of expertise. **Main Research Question:** How can portfolio management integrate and improve DoD's decision making across the budget, requirements, and acquisition processes? **Secondary Questions:** • What is the status of implementing Portfolio Management in DoD USD A&S? Does it sufficiently integrate the budget, requirements generation, and acquisition processes? • How do commercial companies use Portfolio Management? • The Air Force's Kessel Run is managing software development with a focus on coordinating capabilities at the enterprise level, not just managing individual programs. Does it provide a model for the rest of DoD?

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	• Can program managers or program executive officers begin applying aspects of portfolio management today, or are changes necessary to existing policy, laws, or regulations? **Data Sources:** • Section 809 Panel Recommendation #36, including implementation language (Volume 3, Section 2, p. 53) https://discover.dtic.mil/wp-content/uploads/809-Panel-2019/Volume3/Recommendation_36.pdf • Section 809 Panel Recommendation #37, including implementation language (Volume 3, Section 2, p. 64) https://discover.dtic.mil/wp-content/uploads/809-Panel-2019/Volume3/Recommendation_37.pdf • Section 809 Panel Recommendation #16, including implementation language (Volume 1, Section 3, p. 111) https://discover.dtic.mil/wp-content/uploads/809-Panel-2019/Volume1/Recommendation_16.pdf • GAO Report, "WEAPON SYSTEM ACQUISITIONS: Opportunities Exist to Improve the Department of Defense's Portfolio Management" https://www.gao.gov/assets/680/672205.pdf • Article: "809 Panel Calls for Managing 'Capabilities,' Not Weapons" https://breakingdefense.com/2019/07/809-panel-calls-for-managing-capabilities-not-weapons/ • Article: "Smarter acquisition of defense business systems prioritizes results over reviews" https://www.federaltimes.com/opinions/2018/04/04/smarter-acquisition-of-defense-business-systems-prioritizes-results-over-reviews/ **POC:** Nick Tsiopanas, nicolas.tsiopanas.ctr@health.mil
T27-017	**Topic: Augmenting the Acquisition Decision Processes with Data Analytics** **Scope:** This is a broad topic. The sponsor is interested in all research within this topic area. Develop your own research project within this topic area. Student researchers should exercise judgment and original thought toward attaining the goals of the study within broad parameters of the selected research area of interest. Researchers are encouraged to be creative in the selection of the technical and management processes; approaches; and consider the greatest and broadest impact possible.
T27-016	**Topic: Applying Model Based Systems Engineering to Defense Acquisition** **Scope:** This is a broad topic. The sponsor is interested in all research within this topic area. Develop your own research project within this topic area. Student researchers should exercise judgment and original thought toward attaining the goals of the study within broad parameters of the selected research area of interest. Researchers are encouraged to be creative in the selection of the technical and management processes; approaches; and consider the greatest and broadest impact possible.

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T27-015	**Topic: The Role of Innovation in Improving Defense Acquisition Outcomes** **Scope:** This is a broad topic. The sponsor is interested in all research within this topic area. Develop your own research project within this topic area. Student researchers should exercise judgment and original thought toward attaining the goals of the study within broad parameters of the selected research area of interest. Researchers are encouraged to be creative in the selection of the technical and management processes; approaches; and consider the greatest and broadest impact possible.
T27-014	**Topic: New Dimensions in Managing Systems of Systems** **Scope:** This is a broad topic. The sponsor is interested in all research within this topic area. Develop your own research project within this topic area. Student researchers should exercise judgment and original thought toward attaining the goals of the study within broad parameters of the selected research area of interest. Researchers are encouraged to be creative in the selection of the technical and management processes; approaches; and consider the greatest and broadest impact possible.
T27-013	**Topic: Effects of Risk Tolerant/Averse Behavior on Cost, Schedule, and Performance** **Scope:** This is a broad topic. The sponsor is interested in all research within this topic area. Develop your own research project within this topic area. Student researchers should exercise judgment and original thought toward attaining the goals of the study within broad parameters of the selected research area of interest. Researchers are encouraged to be creative in the selection of the technical and management processes; approaches; and consider the greatest and broadest impact possible.
T27-012	**Topic: Rapid Acquisition** **Scope:** This is a broad topic. The sponsor is interested in all research within this topic area. Develop your own research project within this topic area. Student researchers should exercise judgment and original thought toward attaining the goals of the study within broad parameters of the selected research area of interest. Researchers are encouraged to be creative in the selection of the technical and management processes; approaches; and consider the greatest and broadest impact possible.
T27-011	**Topic: Cybersecurity** **Scope:** This is a broad topic. The sponsor is interested in all research within this topic area. Develop your own research project within this topic area. Student researchers should exercise judgment and original thought toward attaining the goals of the study within broad parameters of the selected research area of interest. Researchers are encouraged to be creative in the selection of the technical and management processes; approaches; and consider the greatest and broadest impact possible.

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T27-010	**Topic: Breaking down silos, enterprise management** **Scope:** This is a broad topic. The sponsor is interested in all research within this topic area. Develop your own research project within this topic area. Student researchers should exercise judgment and original thought toward attaining the goals of the study within broad parameters of the selected research area of interest. Researchers are encouraged to be creative in the selection of the technical and management processes; approaches; and consider the greatest and broadest impact possible.
T27-009	**Topic: Incentivizing the workforce** **Scope:** This is a broad topic. The sponsor is interested in all research within this topic area. Develop your own research project within this topic area. Student researchers should exercise judgment and original thought toward attaining the goals of the study within broad parameters of the selected research area of interest. Researchers are encouraged to be creative in the selection of the technical and management processes; approaches; and consider the greatest and broadest impact possible.
T27-008	**Topic: Leadership Development and Talent Management** **Scope:** This is a broad topic. The sponsor is interested in all research within this topic area. Develop your own research project within this topic area. Student researchers should exercise judgment and original thought toward attaining the goals of the study within broad parameters of the selected research area of interest. Researchers are encouraged to be creative in the selection of the technical and management processes; approaches; and consider the greatest and broadest impact possible.
T27-007	**Topic: Innovative Contracting Strategies - contracting at the speed of relevance** **Scope:** This is a broad topic. The sponsor is interested in all research within this topic area. Develop your own research project within this topic area. Student researchers should exercise judgment and original thought toward attaining the goals of the study within broad parameters of the selected research area of interest. Researchers are encouraged to be creative in the selection of the technical and management processes; approaches; and consider the greatest and broadest impact possible.
T27-006	**Topic: Industry Best Practices and Barriers to applying them to DoN Acquisition** **Scope:** This is a broad topic. The sponsor is interested in all research within this topic area. Develop your own research project within this topic area. Student researchers should exercise judgment and original thought toward attaining the goals of the study within broad parameters of the selected research area of interest. Researchers are encouraged to be creative in the selection of the technical and management processes; approaches; and consider the greatest and broadest impact possible.

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T27-005	**Topic: Invigorating and Understanding the Industrial Base** **Scope:** This is a broad topic. The sponsor is interested in all research within this topic area. Develop your own research project within this topic area. Student researchers should exercise judgment and original thought toward attaining the goals of the study within broad parameters of the selected research area of interest. Researchers are encouraged to be creative in the selection of the technical and management processes; approaches; and consider the greatest and broadest impact possible.
T27004	**Topic: Workforce Bench Strength - now and planning for the future** **Scope:** This is a broad topic. The sponsor is interested in all research within this topic area. Develop your own research project within this topic area. Student researchers should exercise judgment and original thought toward attaining the goals of the study within broad parameters of the selected research area of interest. Researchers are encouraged to be creative in the selection of the technical and management processes; approaches; and consider the greatest and broadest impact possible.
T27-003	**Topic: Innovative Defense Acquisition Concepts** **Strategic Communication (STRATCOM) Plans for Defense Acquisition Programs** This project would look at the importance of a STRATCOM plan in the success or failure of defense acquisition programs. A Stratcom plan is more than a public affairs guidance, and it serves as a program synchronization tool for the PM to get an entire Service "on the same sheet of music" for a particular program. This project would investigate the existence of Stratcom plans for particular programs and examine possible correlation with program success. This project would also look into the best techniques to develop and get a plan approved that is actually useful to Senior leaders. **POC:** Dr. Robert F. Mortlock, COL (Ret), U.S. Army, 831-656-2672, rfmortlo@nps.edu
T27-002	**Topic: Organic and Commercial Industrial Base: How to maintain the viability of each in a time of declining resources.** **Scope:** This is a broad topic. The sponsor is interested in all research within this topic area. Develop your own research project within this topic area. Student researchers should exercise judgment and original thought toward attaining the goals of the study within broad parameters of the selected research area of interest. Researchers are encouraged to be creative in the selection of the technical and management processes; approaches; and consider the greatest and broadest impact possible.
T27-001	**Topic: Case Studies of Defense Acquisition Programs** The development of research historical case study and/or teaching case study based on past acquisition programs provides unique insights into the challenges within the Defense Acquisition institution. These case studies can then be used to enhance the course content and keep the courses relevant with current issues facing program managers. Case studies can focus on critical thinking, decision-making, stakeholder management, cost benefit analysis, ambiguous test results, quality challenges, and other areas pertinent to project management. Case study development involves the creation of new and innovative ways to relay information. Potential topics could include specific acquisition programs like

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	shipbuilding, aircraft, combat vehicles, missile, and/or other weapon/information systems programs. Alternately, the case studies could focus on the application of relevant technologies like 3D printing/additive manufacturing, artificial intelligence, autonomy/unmanned systems, ISO 9001 quality standards, behavioral acquisition, process mapping, test & evaluation, and/or other emerging technologies. **Research Question:** Can we use a deep-dive analysis of past defense acquisition programs to document lessons learned, inform acquisition reform initiatives and enhance critical thinking among acquisition professionals? **NPS POC:** Dr. Robert F. Mortlock, COL (Ret), U.S. Army, 831-656-2672, rfmortlo@nps.edu