The Doctrine Gap:

Why the U.S. Military Lacks Authoritative Combined Arms C-UAS Doctrine and What It Costs Operationally

ASSESSMENT SCOPE

This paper examines the absence of authoritative joint C-UAS doctrine, the fragmentation of C-UAS roles across Air Defense Artillery, Electronic Warfare, aviation, and maneuver branches, and the operational consequences that fragmentation has produced. Drawing on the doctrine development process under JP 3-01, the Army's ATP 3-01.81, FM 3-01, and FM 3-0, the lessons from Tower 22, the CALL NTC analysis, and the IED doctrinal precedent of JIEDDO, the paper assesses the gap between what C-UAS doctrine says and what the operational environment requires, and proposes a framework for doctrinal development that matches threat evolution rather than trailing it by years.

PRIMARY SOURCES

ATP 3-01.81 Counter-UAS Operations (Aug 2023 / May 2025) | FM 3-01 Army Air and Missile Defense (Aug 2025) | FM 3-0 Operations (2022 / Mar 2025 revision) | JP 3-01 Countering Air and Missile Threats (Mar 2024) | CRS R48477 DoD C-UAS Background and Issues for Congress (Mar 2025) | CALL No. 25-1093 NTC C-UAS (Sep 2025) | Tower 22 Army Investigation (Washington Post, Apr 2025; CNN; Breaking Defense Jan 2024) | Infantry Magazine: C-SUAS at the Tactical Level (CW4 Wilk, Spring 2024) | ADA Bulletin: Organic Red Air / C-sUAS (2024) | MSHORAD in BCT Operations CALL Paper (Apr 2025) | DoD Strategy for Countering Unmanned Systems (Dec 2024) | JAPCC: Adapting IAMD Training and Doctrine for Hypersonics and Drones (May 2025) | JIEDDO / JIDO doctrine development analogy (GlobalSecurity, RAND, CFC papers) | Federal News Network: DoD Stands Up JIATF for Counter-UAS / JIEDDO Comparison (Jul 2025) | JIATF 401 Establishment Memo (Aug 2025) | Army.mil Drone Dominance Doctrine Update (Mar 2026) | BG Chalfont ABCT Transformation (Sep 2025)

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This paper draws exclusively on publicly available and officially released sources. No classified information is referenced.

Executive Summary

Doctrine is not an academic exercise. It is the institutional mechanism by which the military translates operational experience into authoritative guidance, assigns responsibilities, establishes planning frameworks, and creates the shared vocabulary that makes joint operations coherent. When doctrine for a capability is absent, fragmented, or structurally misaligned with the threat it is supposed to address, the military does not simply operate inefficiently. It operates dangerously. The doctrine gap in combined arms C-UAS is not a future planning problem. Its consequences have already been paid.

Tower 22. January 28, 2024. A one-way attack drone approached a small U.S. logistics outpost in Jordan at approximately the same time an American surveillance drone was returning to base. The confusion over whether the approaching aircraft was friend or foe delayed the defensive response. The drone was never detected by the base's aging TPS-75 radar, which was reportedly inoperable 80 percent of the time according to deployed personnel. Tower 22 had no kinetic defeat capability, only electronic warfare systems designed to disable drones rather than destroy them. Three U.S. Army Reserve Soldiers were killed: Sergeant William Rivers, Specialist Kennedy Sanders, and Specialist Breonna Moffett. A subsequent Army investigation found the attack was most likely preventable and that numerous failures, from complacency and indecisiveness to outright negligence, contributed to the outcome. The investigation also found that Tower 22 had been denied an upgrade to more capable air defense systems in the months before the attack.

The Tower 22 investigation identifies individual and unit-level failures. This paper identifies the doctrinal structure that created the conditions for those failures. The base had no authoritative joint doctrine specifying how C-UAS detection, classification, identification, and defeat should be integrated across an installation defense plan. The electronic warfare assets available were governed by a different doctrinal framework than the kinetic defeat concepts that might have supplemented them. There was no common C-UAS planning template, no standardized battle drill shared across services, and no joint publication that told the soldiers and commanders at Tower 22 exactly who was responsible for what in a layered C-UAS defense of a joint logistics node.

This is the doctrine gap. It is not that no doctrine exists. Army Techniques Publication 3-01.81, published August 2023 and revised May 2025, provides C-UAS guidance for brigade-level and below operations. FM 3-01, revised August 2025, addresses Air Defense Artillery roles in AMD operations and references C-UAS in the context of the ADA force. The revised Tank Platoon manual designates C-UAS as a Critical Tactical Task. FM 3-0's March 2025 revision introduced drone-focused operational imperatives. But there is no joint publication addressing combined arms C-UAS as an integrated warfighting function: no equivalent of JP 3-01 for the small-UAS threat environment, no joint doctrine that resolves the command relationship between ADA, EW, aviation, and maneuver forces when all four are engaged in C-UAS operations simultaneously, and no authoritative framework for how C-UAS planning integrates into the joint operations planning process.

THE DOCTRINE GAP, DEFINED

The C-UAS doctrine gap is the absence of a joint authoritative publication that: (1) defines the combined arms C-UAS mission as a joint warfighting function with assigned roles, responsibilities, and command relationships across all services and capability domains; (2) establishes a common C-UAS planning framework integrated into the JOPP and MDMP; (3) resolves the role fragmentation between ADA, EW, aviation, and maneuver

forces through a doctrine of mutual support rather than a doctrine of shared responsibility; and (4) creates a doctrine revision mechanism that can respond to threat evolution faster than the standard 3-to-5 year publication cycle.

The consequence of this gap is not inefficiency. It is preventable casualties, installation vulnerabilities, and operational formations that arrive at combat training centers without the foundational C-UAS knowledge that only authoritative doctrine can deliver.

1. The Doctrinal Landscape: What Exists and What It Cannot Do

1.1 The Service-Level Doctrine Stack

The Army's C-UAS doctrinal architecture is built on three publications that together cover significant technical and tactical ground but do not add up to a combined arms framework. ATP 3-01.81, revised May 2025 with the Fires Center of Excellence at Fort Sill as proponent, provides planning and integration guidance for C-UAS platforms in layered defense and both active and passive defense techniques. The May 2025 revision notes that countering unmanned aircraft systems is not a stand-alone effort or the sole responsibility of any warfighting function or branch, and that C-UAS is part of local security and counter reconnaissance missions that is the responsibility of every Soldier and unit. This formulation is operationally accurate. It is also doctrinally insufficient.

Declaring that C-UAS is the responsibility of every Soldier and unit does not assign planning authority. It does not establish who controls C-UAS sensors at the brigade level when those sensors are operated by ADA, EW, and maneuver units simultaneously. It does not specify how conflicting ROE interpretations between an EW officer who wants to jam and an aviation unit commander whose aircraft would be disrupted by the jam are resolved. It does not define the staff function that integrates C-UAS into the operations order. The ATP's formulation that C-UAS is everyone's responsibility is the doctrinal equivalent of saying that physical security is everyone's responsibility: accurate as a general principle, operationally unhelpful when a specific threat requires a specific response from a specific element of the force at a specific time.

FM 3-01, revised August 2025, addresses C-UAS primarily within the ADA doctrinal context. The manual describes ADA's role in countering air and missile threats under JP 3-01, establishes the Air Defense Support Element (formerly ADAM cell) as the coordination node at brigade and above, and outlines how ADA integrates with maneuver forces. FM 3-01's treatment of C-UAS reflects a structurally sound ADA-centric approach but does not resolve the fundamental question of how C-UAS integrates across the force when ADA assets are insufficient to cover the threat density. ATP 3-01.81 explicitly acknowledges that ADA and ADAM cells in corps, divisions, and subordinate IBCTs cannot simultaneously conduct doctrinal requirements to support commanders at echelon and conduct engagement operations in support of C-UAS, confirming that ADA-alone C-UAS is not operationally viable.

1.2 What JP 3-01 Provides and What It Omits

Joint Publication 3-01, Countering Air and Missile Threats, was revised in March 2024. It is the joint doctrinal authority for the counterair mission, addressing defensive counterair operations, joint airspace control, and the integration of service-specific air defense capabilities into joint operations. JP 3-01 establishes that

engagement authority originates at the joint force commander (JFC) and can be delegated to the area air defense commander (AADC), and that individual fire unit engagement authority can be delegated based on operational necessity and ROE for defensive counterair operations.

JP 3-01 does not address small UAS as a distinct threat category requiring its own integrated doctrinal treatment. The publication's framework was designed for the air and missile threat environment characterized by manned aircraft, cruise missiles, and ballistic missiles. The small commercial and military-grade drone, which now accounts for 42 percent of vehicle losses in Ukraine and has struck U.S. installations from Jordan to Iraq to the U.S. homeland, operates in a threat category that existing JP 3-01 engagement authority frameworks were not designed for. An FPV drone costing $500 and weighing one kilogram is not a cruise missile. The engagement authority, ROE framework, identification criteria, and command relationship structures that apply to cruise missile defense do not translate to the small-drone engagement environment without modification.

The doctrinal deficit is confirmed by what BG Chalfont's September 2025 article on ABCT transformation identifies as the active effort to establish UAS, C-UAS, and emissions control training standards for tactical units and doctrine, a statement that acknowledges those standards are still being established rather than already codified in authoritative joint doctrine. The MSHORAD in BCT Operations analysis from the CALL series references the yet-to-be-published FM 3-01 in connection with C-UAS integration, illustrating the lag between operational practice and formal doctrinal authority.

1.3 The Role Fragmentation Problem

The infantry magazine analysis of C-SUAS at the Tactical Level, published Spring 2024 by CW4 Wesley K. Wilk, provides the most precise description of the role fragmentation problem from the perspective of a practitioner who has served at every echelon from platoon to brigade in formations that are expected to conduct C-UAS. Wilk's analysis identifies that C-SUAS cannot be considered solely an EW or air defense problem set when conducting operations. The staff function of planning and integrating C-SUAS planners at every echelon brigade and above must include EW Technicians (MOS 170B), UAS Operations Technicians (MOS 150U), and 14A Air Defense Artillery officers. All three specialties must contribute to C-UAS planning. None of them alone can execute it.

The operational consequence of this multi-branch requirement without a doctrinal framework to govern it is ad hoc coordination that works when personalities align and fails when they do not. ADA officers operating LIDS or FS-LIDS have organic C-UAS defeat capability but limited visibility into the maneuver plan. EW officers operating jammers have EW fratricide concerns that create restrictions on their employment precisely when C-UAS threats are most acute. Aviation unit commanders, whose aircraft are in the same airspace that C-UAS sensors and effectors are monitoring, have airspace deconfliction requirements that bear on whether jamming can be employed at all. Maneuver commanders, who have the most immediate protection requirement, have the least organic C-UAS expertise. The result is described precisely by CALL No. 25-1093: C-UAS is relegated to a secondary role, forgotten about until a drone swarm overflight of a headquarters reminds leaders of its importance, and quickly forgotten again when the focus returns to maneuver.

2. The Operational Cost: When Doctrine Gaps Become Casualties

2.1 Tower 22: Doctrine Failure as Casualty Event

The Tower 22 attack on January 28, 2024, killed three U.S. Army Reserve Soldiers and wounded more than 40 others. The Washington Post's April 2025 reporting on the Army's internal investigation, obtained through a Freedom of Information Act request, identified the attack as most likely preventable and attributed the outcome to numerous failures, from complacency and indecisiveness to outright negligence. The investigation also found that Tower 22 had been denied an upgrade to more capable air defense systems in the months before the attack, that the base's TPS-75 radar was inoperable approximately 80 percent of the time, and that the base had no kinetic C-UAS defeat capability.

The doctrinal dimension of the Tower 22 failure is the absence of an authoritative standard that would have governed C-UAS defense planning for a joint logistics node of Tower 22's size and operational context. The investigation found that commanders above Tower 22 also failed to envision the base's vulnerability. This command failure reflects a doctrinal vacuum: without an authoritative joint publication specifying the minimum C-UAS protection standard for a joint logistics node, no commander at any echelon had a doctrinal baseline against which to measure Tower 22's protection posture and find it deficient.

The identification confusion that contributed directly to the attack's success, in which an Iranian-backed drone approached Tower 22 at approximately the same time a U.S. surveillance drone was returning to base, reflects the absence of a joint C-UAS track management doctrine that would have defined airspace separation procedures, friend-or-foe identification protocols, and the engagement authority framework applicable when track confusion exists. These are doctrinal questions that the March 2024 JP 3-01 revision does not answer for the small-UAS threat environment. They remain unanswered in any joint publication.

2.2 The NTC Pattern: Doctrinal Deficiency Reproduced at Scale

Tower 22 is the most consequential individual data point for the doctrine gap. CALL No. 25-1093, published September 2025, provides the systemic data point: units rotating through the National Training Center arrive without foundational C-UAS knowledge, are forced to learn C-UAS tactics on the fly during the rotation, and fail to integrate C-UAS into combined arms operations with any consistency. The absence of robust Tactical Standard Operating Procedures and a lack of structured home station training are directly caused by the absence of authoritative doctrine from which those TACSOPs and training programs should be derived.

The CALL analysis identifies that C-UAS is nearly always relegated to a secondary role despite senior leader recognition of its importance, and that the moment of recognition is quickly forgotten when attention returns to maneuver and breach operations. This pattern is not a training problem, a leadership problem, or a resource problem. It is a doctrinal incentive problem. When no authoritative joint publication assigns C-UAS as a required planning element for every combined arms operation, when no mission-essential task list requires C-UAS integration as a condition for certification, and when no standardized battle drill exists for C-UAS immediate action, the training program that would build the foundational knowledge units need has no doctrinal foundation on which to rest. The CALL finding that units arrive at NTC without foundational C-UAS knowledge is the predictable output of a doctrinal architecture that has not yet told them what that foundational knowledge is required to be.

2.3 The Middle East Pattern: 165 Attacks Before Tower 22

From October 17, 2023, to January 28, 2024, U.S. forces in the Middle East sustained 165 attacks by Iran-backed militias using UAS and missiles, 66 in Iraq and 98 in Syria, before Tower 22. The breaking defense reporting from January 2024 notes that CENTCOM said every base with troops inside the CENTCOM region had C-UAS capabilities that can include layered kinetic and electronic warfare capabilities. The question that 165 attacks without a doctrinal response mechanism answered is: capability is not doctrine. Having EW jammers and Coyote interceptors assigned to various facilities does not constitute a joint C-UAS doctrine. Having a C-UAS capability does not mean having a common planning framework, a shared threat picture, standardized engagement authority, or a protocol for integrating installation C-UAS into theater-level airspace management.

The DoD's December 2024 Counter-Unmanned Systems Strategy, the first comprehensive strategic document to address the threat, explicitly commits to institutionalizing approaches across doctrine, organization, training, materiel, leadership, personnel, facilities, and policy. The strategy's very commitment to institutionalize doctrine across these DOTMLPF-P elements confirms that, as of December 2024, the institutionalization was not yet complete. A strategy that commits to institutionalizing doctrine is not itself doctrine. The institutional work it describes remains to be done.

3. The Structural Causes: Why Doctrine Trails the Threat

3.1 The Publication Cycle and the Velocity of the Threat

Joint doctrine is developed through a deliberate process managed by the Joint Staff J7 that typically requires three to five years from identification of a doctrinal requirement to publication of a joint doctrine note or joint publication. The process includes doctrine sponsors, review cycles, interagency coordination, and service concurrence. This process is designed to produce durable, authoritative doctrine that reflects the considered judgment of the joint force. It is not designed to respond to threat evolution at the pace of commercial drone technology development.

The small commercial drone went from hobby quadcopter to precision-strike weapon in approximately 18 months of the Russo-Ukrainian War. Ukrainian FPV drone production reached 200,000 per month by 2025 from essentially zero in early 2022. The doctrinal development cycle that takes three to five years to produce a joint publication cannot keep pace with a threat that evolves in months. When JP 3-01 was revised in March 2024, the FPV drone's role in Ukraine was already established, documented, and analyzed. That revision still did not produce a small-UAS-specific C-UAS framework within JP 3-01. The doctrinal process moved; the threat moved faster.

The JAPCC analysis of adapting IAMD training and doctrine for hypersonics and drones, published May 2025, confirms this lag at the NATO level: traditional training programs have not sufficiently prepared personnel to identify and classify low, slow, and small drones, and current air defense doctrine exposes vulnerabilities in sensor coverage, target tracking, C2, and magazine depth that adversaries exploit in current conflicts. The doctrine lag is not a uniquely American problem. It is a structural characteristic of institutional doctrine development systems that were designed for a slower-moving threat environment.

3.2 The Proponent Fragmentation Problem

Joint doctrine for a warfighting function requires a sponsoring organization and a doctrinal proponent who will advocate for, develop, and maintain the publication. C-UAS spans multiple warfighting functions and multiple proponents. ATP 3-01.81's proponent is the Fires Center of Excellence at Fort Sill. FM 3-01's foundation is the Air Defense Artillery School. The Maneuver Center of Excellence at Fort Benning is the proponent for maneuver C-UAS integration. EW doctrine falls under a separate proponent. Aviation survivability doctrine has its own proponent. No single proponent owns combined arms C-UAS as an integrated joint function.

This proponent fragmentation is the doctrinal expression of the operational role fragmentation that the CW4 Wilk analysis identifies. Because no single branch or warfighting function owns C-UAS, no single institutional organization advocates for a joint publication that addresses C-UAS as an integrated combined arms function. Each proponent produces doctrine for its own C-UAS contribution. None produces doctrine for the combined arms integration problem.

JIATF 401, established August 2025 as the DoD's operational C-UAS authority, is the first organization with a cross-service C-UAS mandate and operational resource authority. The JIATF 401 establishment memorandum designates the Joint Counter-small UAS University at Fort Sill as the institutional C-UAS training node. But the memorandum does not designate JIATF 401 as a doctrinal proponent. The distinction matters. Training can be developed without doctrine. Training developed without doctrine produces inconsistent results because it has no authoritative framework to anchor standardization.

3.3 The "Everyone's Responsibility" Trap

The CRS R48477 analysis of ATP 3-01.81 identifies the operational and doctrinal implication of the current everyone's-responsibility formulation precisely: Army and Marine Corps officials have expressed the view that the responsibility for countering UAS, especially small drones in Groups 1 and 2, is a task shared by all military personnel. This view is operationally rational given the distribution and density of the small-UAS threat. It is also the doctrinal equivalent of no one's responsibility in practice.

When responsibility is universally shared, the planning question of who is responsible for what specific C-UAS function in a specific operation remains unanswered. A maneuver battalion commander who is told that C-UAS is everyone's responsibility has no doctrinal basis for ordering an ADA ADAM cell to reposition its sensor coverage to protect the battalion's main effort. The ADAM cell commander who is told that C-UAS is the responsibility of every warfighting function has no doctrinal basis for prioritizing one supported unit's protection requirement over another when sensors and effectors are insufficient to cover every unit simultaneously. These are not questions that individual talent, leadership, or initiative can systematically resolve. They require authoritative doctrine.

Exhibit 1 | C-UAS Doctrine by Functional Area: Current Publication Map and Coverage Gap

Functional Area	Current Doctrinal Coverage	Proponent	Combined Arms Gap
Air Defense Artillery (ADA) C-UAS	FM 3-01 (Aug 2025): AMD operations; ADA role; IBCS/M-SHORAD integration. ATP 3-01.8: Combined Arms for Air Defense	Fires CoE / ADA School, Fort Sill	Addresses ADA contribution but not integration with maneuver, EW, and aviation in combined C-UAS

Functional Area	Current Doctrinal Coverage	Proponent	Combined Arms Gap
C-UAS Techniques (Brigade and Below)	ATP 3-01.81 (May 2025): Planning integration, layered defense, active/passive techniques; C-UAS as combined arms responsibility	Fires CoE, Fort Sill	Does not assign planning authority, resolve role conflicts, or establish C-UAS staff function above the brigade level
Electronic Warfare (EW) in C-UAS	FM 3-12 (2025): Cyberspace and EW operations; EW as fires warfighting function support. ATP 3-36: EW techniques	Cyber CoE / EW proponent	No joint doctrine resolving jamming authority vs. aviation airspace and C-UAS sensor deconfliction
Maneuver Force C-UAS Integration	FM 3-0 (Mar 2025 revision): Drone operational imperatives; TC 3-20.31 (2025): Air guard as Critical Tactical Task; TC 3-20.20 (Apr 2025): Maneuver platoon training	Maneuver CoE, Fort Benning (MCoE)	No combined arms C-UAS collective task list; no staff integration doctrine at battalion and above
Aviation Force C-UAS / Survivability	Aviation Mission Survivability Officer (AMSO) program; ASE doctrine; no dedicated C-UAS aviation publication	Aviation CoE	No doctrine for integrating aviation assets as C-UAS effectors or governing aviation/C-UAS airspace deconfliction
Joint C-UAS (All Services)	JP 3-01 (Mar 2024): Countering air and missile threats; defensive counterair engagement authority and AADC framework	Joint Staff J7	No small-UAS-specific joint C-UAS framework; no combined arms C-UAS command relationship doctrine; no joint C-UAS planning template

4. The IED Precedent: What JIEDDO's Doctrine Development Offers

4.1 The Structural Parallel

The comparison between the C-UAS doctrinal challenge and the IED doctrinal challenge of 2003-2006 is not rhetorical. Former Army Vice Chief of Staff General James Mingus explicitly made the comparison when JIATF 401 was established in August 2025, noting that the C-UAS challenge is analogous to the IED crisis during the Global War on Terror, which led to JIEDDO's creation. The structural elements that make the comparison operationally instructive for doctrine development are specific.

In 2003 and 2004, the IED was not a doctrinal category in any U.S. Army or joint publication. It was an operational phenomenon that units encountered without doctrinal guidance on how to detect, avoid, defeat,

or exploit information about it. The resulting casualty rates prompted a national-level response: the Army IED Task Force in October 2003, transformed into the joint JIEDDO in January 2006. Between 2006 and 2008, the U.S., United Kingdom, Australia, and Canada all published versions of their C-IED doctrine. NATO eventually consolidated these into Allied Joint Publication AJP-3.15. JIEDDO's three lines of effort, defeat the device, attack the network, and train the force, provided the doctrinal organizing framework that connected capabilities to strategy.

The C-UAS situation in 2024-2026 mirrors the IED situation in 2003-2005 in three critical respects. First, a novel threat with low cost and high lethality is being employed at scale before the joint force has developed the doctrine to defeat it systematically. Second, service-specific and unit-level responses are proliferating in the absence of joint doctrine, creating the same kind of inconsistency and inefficiency that characterized early C-IED operations. Third, the doctrinal ownership question remains unresolved: C-IED was eventually claimed by JIEDDO because no existing branch or warfighting function wanted to own a mission that cut across all of them. C-UAS is in the same structural position.

4.2 The Key Lessons for C-UAS Doctrine Development

The JIEDDO experience offers four specific lessons for the C-UAS doctrine development challenge. First, rapid capability delivery without doctrine creates operational inconsistency. JIEDDO was initially criticized for focusing on technology, specifically MRAP vehicles and electronic jammers, without developing the doctrinal framework that governed their employment. The same pattern is visible in C-UAS: DroneBusters, M-LIDS, Coyote interceptors, and EW kits have been fielded at varying rates without a joint doctrinal framework that specifies who employs them, under whose authority, in what sequence, and according to what ROE.

Second, the JIEDDO model illustrates that effective rapid doctrine development requires a single organization with an unambiguous mandate and adequate resources. JIEDDO's ability to develop and deploy a capability in as little as three to four months, 75 percent faster than the standard acquisition process, depended on clear authority and direct access to combatant commander requirements. JIATF 401 has been given comparable acquisition authority. It has not been given a comparable doctrinal development mandate.

Third, the JIEDDO three-line framework, defeat the device, attack the network, and train the force, succeeded as a doctrinal organizing principle because it was simple enough to be understood and remembered by every echelon of the force while comprehensive enough to address the full range of C-IED activities. A comparable C-UAS doctrinal organizing principle has not been formally codified. The DoD's December 2024 Counter-Unmanned Systems Strategy's five strategic ways provide a strategic organizing framework; they do not constitute operational or tactical doctrine.

Fourth, the JIEDDO experience confirms that the transition from ad hoc response to institutionalized doctrine takes longer than operational urgency demands. Even with JIEDDO's rapid acquisition authorities and direct combatant commander access, the IED doctrinal framework was not fully institutionalized until 2008-2012, years after the threat had first killed U.S. personnel. For C-UAS, the relevant question is not whether doctrine will eventually be developed but how many operational consequences will accumulate during the years it takes to develop it.

5. The Required Doctrinal Framework: Structure, Content, and Development Mechanism

5.1 The Combined Arms C-UAS Doctrinal Framework

Effective combined arms C-UAS doctrine must address five elements that no current publication addresses in integrated form: mission ownership, command relationships, the planning framework, the combined engagement sequence, and the rapid revision mechanism.

Element 1: Mission Ownership and Proponency

A joint C-UAS publication requires a designated joint proponent. JIATF 401 is the most appropriate candidate. The establishment memorandum grants JIATF 401 operational authority across all services for small C-UAS. That authority should be extended to include doctrinal proponency for joint C-UAS publications. Under JIATF 401's doctrinal mandate, the Fires Center of Excellence and JCU would continue to serve as the Army-specific proponent for ATP 3-01.81 and related training publications. JIATF 401's joint doctrinal mandate would span the gap between service-specific doctrine and the integrated joint function that no current publication addresses.

Element 2: Command Relationships

The joint C-UAS publication must resolve the command relationship question that the combined arms role fragmentation creates. Specifically: when ADA, EW, aviation, and maneuver C-UAS capabilities are all operating within the same operational area, who controls C-UAS sensors, who controls C-UAS effectors, and who resolves conflicts between them? The answer will vary by echelon, by operational environment, and by the specific mix of capabilities available, which is precisely why doctrine must provide a framework rather than a single answer. The JP 3-01 engagement authority model, in which authority originates at the JFC and is delegated through the AADC to individual fire units, provides the structural template. The joint C-UAS publication must apply this template specifically to the small-UAS threat environment and resolve the role fragmentation that the existing template leaves unaddressed.

Element 3: The C-UAS Planning Framework

Every combined arms operation requires a C-UAS annex to the operations order. The joint C-UAS publication must establish the standard content of that annex: the UAS threat assessment, the layered defense scheme by echelon, the sensor coverage plan, the effector employment plan keyed to ROE thresholds, the airspace deconfliction plan governing the relationship between C-UAS sensors and effectors and friendly aviation, the EW employment plan including fratricide avoidance procedures, and the reporting and track management protocol. This planning framework does not need to be prescribed in detail for every operational environment. It needs to be specified as a doctrinal minimum that all commanders and staffs planning combined arms operations are required to address.

Element 4: The Combined Arms C-UAS Engagement Sequence

ATP 3-01.81 describes layered defense in general terms. The joint C-UAS publication must specify the combined arms engagement sequence: the point at which passive defensive measures are employed, the detection threshold at which the battle drill initiates, the identification criteria and decision criteria under which engagement authority is exercised, the sequence in which kinetic and non-kinetic effectors are

employed to minimize EW fratricide while maximizing defeat probability, and the reporting protocol that initiates higher-echelon sensor and effector response. This sequence cannot be abstract. It must specify the roles of the specific functional elements, ADA, EW, maneuver, and aviation, in each phase of the engagement. The Tower 22 confusion over friend-or-foe identification is the operational consequence of the absence of an authoritative engagement sequence that specifies what to do when a returning friendly UAS and an approaching enemy UAS are in the same track picture simultaneously.

Element 5: The Rapid Revision Mechanism

The standard joint doctrine revision cycle of three to five years is incompatible with the pace at which the drone threat is evolving. The joint C-UAS publication must include a formal mechanism for rapid revision: a standing JIATF 401 doctrine cell that monitors operational lessons from deployed formations, exercises, and CTC rotations, synthesizes those lessons into doctrinal changes on a quarterly basis, and publishes joint doctrine notes or change pages that update the authoritative publication within 90 days of a validated lesson. This mechanism should be explicitly modeled on JIEDDO's Rapid Capability Delivery process, adapted for doctrinal rather than material outputs. The March 2026 Army doctrine update that incorporated drone lessons force-wide, integrating lessons from Ukraine and TiC rotations into FM 2-0, FM 3-0, and maneuver publications, provides the model for what rapid doctrinal revision at service level looks like. A comparable mechanism does not currently exist at the joint level for C-UAS.

Exhibit 2 | Joint C-UAS Doctrine Development Roadmap

Action	Timeline	Lead	Authority / Product
Designate JIATF 401 as joint proponent for a joint C-UAS publication; direct Joint Staff J7 to initiate a joint doctrine note on combined arms C-UAS as the precursor publication	0 to 90 days	Deputy Secretary of Defense / JIATF 401 Director	JIATF 401 establishment memo extension; J7 doctrine development authority
Publish Joint Doctrine Note on Combined Arms C-UAS: defines mission ownership, command relationships, planning framework, and engagement sequence; bridges gap between JP 3-01 and service-specific C-UAS doctrine	0 to 12 months	JIATF 401 / Joint Staff J7 / Service representatives	J7 joint doctrine note process; 90-day expedited review under JIATF 401 proponency
Revise JP 3-01 (Countering Air and Missile Threats) to include a dedicated chapter on small-UAS as a distinct threat category, with engagement authority framework, ROE thresholds, and airspace deconfliction requirements applicable to Groups 1-3	12 to 24 months	Joint Staff J7 / JIATF 401 / Service proponents	Standard JP revision process with JIATF 401 sponsor; service concurrence requirement
Establish a standing JIATF 401	0 to 6	JIATF 401	JIATF 401 implementing directive; TRADOC

Action	Timeline	Lead	Authority / Product
Doctrine Cell with quarterly review authority to publish joint doctrine notes or change pages; incorporate NTC / CTC lessons, TiC rotation data, and CENTCOM/CENTCOM deployed formation reports	months	Director / TRADOC	lessons learned integration process
Revise all service-specific C-UAS ATP/FM publications to align with the joint doctrine note framework; update ATP 3-01.81 and FM 3-01 to reference and incorporate the combined arms C-UAS command relationship and planning framework	12 to 24 months	Fires CoE / MCoE / Service proponents	Standard service publication revision process; directed by JIATF 401 joint proponent
Direct TRADOC to develop a Mission-Essential Task for combined arms C-UAS integration at platoon, company, battalion, and brigade levels, derived from the joint doctrine note framework; incorporate into all unit METL and CTC certification standards	6 to 18 months	TRADOC / JIATF 401 / MCoE / Fires CoE	TRADOC FORCE DESIGN; CTC certification directive; JIATF 401 training mandate
Establish a C-UAS planning annex template as a required element of every combined arms OPORD at brigade and above; direct Joint Staff J3 to incorporate into Joint Operations Planning processes	6 to 12 months	Joint Staff J3 / JIATF 401	J3 planning policy directive; OPR assignment to JIATF 401 for C-UAS annex standard
Develop NATO-aligned C-UAS doctrine publication, adapting the joint C-UAS framework for coalition operations; coordinate through JAPCC and the NATO Counter-UAS Working Group	24 to 48 months	JIATF 401 / Joint Staff J5 / NATO partners	NATO standardization agreement; JAPCC C-UAS doctrine partnership
Require annual C-UAS doctrine review by the JIATF 401 Doctrine Cell; publish public summary of doctrine updates and operational lessons incorporated; report to Congress as part of existing C-UAS annual report requirements under FY2025 NDAA Section 925	Annual (recurring)	JIATF 401 Director / OSD	FY2025 NDAA reporting requirement; JIATF 401 standing doctrine review authority

6. Conclusion: The Cost of Doctrine Deferred

Three Army Reserve Soldiers died at Tower 22 in January 2024. The Army's internal investigation found the attack was most likely preventable. The investigation identified individual and unit failures. This paper has identified the doctrinal structure within which those failures occurred: the absence of a joint authoritative publication specifying how C-UAS detection, identification, and defeat should be integrated across an installation defense plan for a joint logistics node; the absence of an engagement sequence that addressed the friend-or-foe confusion that delayed the response; and the absence of a minimum protection standard against which the base's air defense posture could have been evaluated and found deficient months before the attack.

The doctrine gap is not a new observation. The HASC directed the Secretary of Defense to develop a C-UAS roadmap in the FY2017 NDAA. Eight years of Congressional direction, strategy documents, organizational changes, and acquisition programs have not produced a joint publication that addresses combined arms C-UAS as an integrated warfighting function. In those eight years, drones went from an emerging threat to the premier anti-armor weapon system on the modern battlefield, accounted for 42 percent of vehicle losses in Ukraine, struck U.S. installations across the Middle East 165 times before killing three Soldiers at Tower 22, and prompted the Secretary of Defense to establish JIATF 401 with extraordinary acquisition and organizational authorities.

Acquisition authority is not doctrine. JIATF 401 can field sensors and effectors faster than any predecessor organization. Without the joint doctrine that specifies how those sensors and effectors integrate into combined arms operations, how command relationships are governed when four branches are simultaneously conducting C-UAS, and how commanders plan and execute C-UAS as a component of every combined arms operation, JIATF 401 will deliver more capability into the same doctrinal vacuum.

The JIEDDO model closed the IED doctrinal gap in roughly five years from initial operational experience to institutionalized joint doctrine. The drone threat has been producing operational consequences for longer than that. The gap is already overdue. The roadmap in this paper does not require new authorities. It requires the application of existing JIATF 401 authority to the doctrinal development mission it already implies. The first step is designation. The second is publication. The third is the discipline to revise doctrine at the speed the threat demands rather than the speed the process allows.

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- Canadian Forces College: Taking Down the Network: Getting Left of the Boom in the Counter-IED Fight (IED doctrinal development, AJP-3.15 precedent)
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