

Initial Thoughts on the Aviation Implications to Field Manual 3-0

By LTC Julie A. MacKnyght

By now, most readers are likely familiar with the news that Field Manual (FM) 3-0, "Operations," was updated and released this past October. Building on the previous 2017 version's discussion of near-peer threats and large-scale combat operations (LSCO), the 2022 FM 3-0 codifies Multidomain Operations (MDO)¹ as the Army's new operational concept. In its simplest definition, according to the FM 3-0 Writing Team Lead LTC Eric Gilge, MDO is the use of all domains in a combined arms fashion. Thus, the concept of combined arms, a bedrock for Army Aviation, is not going away, but rather increasing in importance and relevance.

So, for time-pressed aviators who don't have the white space to catch up on a 280-page document, what's the so-what for Army Aviation? This article addresses the Directorate of Training and Doctrine's (DOTD) initial thoughts, as presented by director COL Eric Puls at the annual Aviation Senior Leader Forum at Fort Rucker, (Novosel), Alabama, in January. However, to fully understand and conceptualize just how impactful the Army's new Operations doctrine is on the Aviation Branch,

"Combined arms is the synchronized and simultaneous application of arms to achieve an effect greater than if each element was used separately or sequentially"
(DA, 2019b, p. 3-9).

we need a robust, non-attributional, intellectually curious, disagreements-welcome professional dialogue. Please send your thoughts to the *Digest*² whether as an article, letter to the editor, or if in doubt about how to best express your ideas, just send us a plaintext email, and we'll figure it out!

The Big Changes

For an in-depth FM 3-0 education, the Combined Arms Center (CAC) has resources for all types of learning styles; websites and a wealth of information are listed at the end of this article. We'll cover the big-picture changes here; however, this is not a comprehensive list of all updates.

New Operational Concept:

Unified Land Operations, or ULO, is replaced with multidomain operations, not-the-MDO (except I am taking liberties with using the acronym to save space in this article—see footnote number 1). While 2017's FM 3-0 stressed how we must win in a complex world by adapting faster than our adversaries to achieve *positions* of relative

"Multidomain Operations are the combined arms employment of joint and Army capabilities to create and exploit relative advantages to achieve objectives, defeat enemy forces, and consolidate gains on behalf of joint force commanders" (Department of the Army [DA], 2022, p. 1-2).

Maneuver:
"movement in conjunction with fires"
(DA, 2019b, p. 4-5)
(Army definition).

advantage,³ the 2022 version focuses on decision dominance and other human and informational factors to accrue relative advantages—especially critical when fighting outnumbered and/or isolated.

Operating in multiple domains is not new for aviation; as MG McCurry, CG of the U.S. Army

Aviation Center of Excellence (USAACE) quips, "Army Aviation: the original cross-domain solution since 1956." We will often be a requested capability, mostly by the ground forces, but in order to be successful (especially in deep operations), we will also need to request higher echelon and/or joint capabilities to support our missions. Additionally, aviation, as a valuable member of the combined arms team, must be employed as a maneuver force rather than simply an enabler.

This means our liaison officers (LNOs), commanders, and pilots-in-command must be fluent not only in the language of Army maneuver to have a seat at the brigade combat team, division, or corps table, but joint as well. As DOTD integrates FM 3-0 (and soon-to-be-published FM 3-90, "Tactics") doctrine into FM 3-04, "Army Aviation" and Army Techniques

¹ The acronym that's not an acronym: neither LSCO nor MDO are Combined Arms Center (CAC)-approved acronyms, and there are no plans to codify them as such in the future. However, the cat has been out of the bag long enough in the common vernacular of professional dialogue and PowerPoint rangering, let alone senior leader messaging, that they are commonly recognized and used across the force. I will use them in this article, as I do in my teaching, to save space/time. Additionally, CAC stresses that multidomain is one word and not hyphenated like it was in the original U.S. Army Training and Doctrine Command concept from 06 December 2018, Training and Doctrine Command Pamphlet 525-3-1, "The U.S. Army Multi-Domain Operations 2028," <https://adminpubs.tradoc.army.mil/pamphlets/TP525-3-1.pdf>

² The *Aviation Digest* team welcomes you to contact them at usarmy.novosel.avncoe.mbx.aviation-digest@army.mil. You can also view/download the current issue, view archive issues, editorial guidelines, (also included on p. 3 of each issue) deadline dates, and subscription link.

³ **position of relative advantage:** A location or the establishment of a favorable condition within the area of operations (AO) that provides the commander with temporary freedom of action to enhance combat power over an enemy or influence the enemy to accept risk and move to a position of disadvantage (originally codified by the now obsolete Army Doctrine Reference Publication 3-0). Currently, Army Doctrine Publication (ADP) 3-0, "Operations," (2019b) is the proponent for this term, which is only used four times in the 2022 FM 3-0 (two of those in the definition of the Movement and Maneuver Warfighting Function) vs. 19 in the 2017 version. **A relative advantage is a location or condition, in any domain, relative to an adversary or enemy that provides an opportunity to progress towards or achieve an objective (A new term created by FM 3-0, 2022, p. 1-3).**

Publication 3-04.1, “Aviation Tactical Employment,”⁴

we are taking a hard look at terms that, though they may be near and dear to many aviators, could instead be replaced with the appropriate joint or Army terms to flatten communications and enhance understanding. The more our language and understanding nest with maneuver doctrine, the closer we will be to our CG’s vision⁵ of doctrinally and tactically literate aviation leaders who truly understand the scheme of ground maneuver, fires, intelligence, protection, and sustainment, not just the aviation portion.

Because MDO stresses the combined arms employment of both Army and joint capabilities, we need to be proactive in finding ways to train with our sister services to build joint experience in our staffs and aircrews. Since unit training relationships built between individuals are temporal based on personnel movement cycles and changes of command, successful interoperability endeavors should be codified in unit Operations Orders, Training Guidance, and/or Memoranda of Agreement/Understanding so they can continue growing vs. having to be continually reshaped.

New Strategic Contexts: The Army strategic contexts described in the new FM 3-0 generally correlate to the joint competition continuum (as opposed to the 2017 FM 3-0 discussing the conflict

continuum). Paragraph 1-67 states, “Army doctrine adds crisis to account for the unique challenges facing ground forces that often characterize transition between competition and armed conflict” (2022, p. 1-14) (Figure 1). For those fans of the range of military operations, it is still alive and well as

a complement to the strategic contexts. One thing to remember is that the Army, and the joint force in general, is always conducting MDO whether we are in competition, crisis, or armed conflict.⁶

For Army Aviation, that means our assets are in high demand no matter where we are in the strategic context; that is nothing new if one looks at our combat aviation brigade commitment rates over the past 20 years. Within any of these contexts, we enable multiple defeat mechanisms⁷ simultaneously, with our speed, range, and lethality creating opportunities for exploitation by the rest of the combined arms team. We expect the doctrinal concept of Air-Ground Operations to remain a bedrock of our contribution to the division/corps scheme of maneuver and our contribution

have strategic-level consequences (good or bad) in any one of these contexts. Though we all intellectually understand that our LNOs need to be our best, that it should hurt to lose them, as a culture it is imperative that we actually start living that. Unlike in the counterinsurgency (COIN) fight, LNOs in LSCO likely will be a more temporal assignment,

as opposed to a permanent attachment. Envision sending your aviation mission survivability officer (AMSO) or best attack/lift planner, for example, to a sister or higher echelon for a specific mission of a specific duration. Remember that our LNOs are Aviation Branch ambassadors and will make or break the maneuver commander’s opinion of what aviation can contribute to the fight.

“Air-Ground Operations (AGO) are the simultaneous or synchronized employment of ground forces with aviation maneuver and fires to seize, retain, and exploit the initiative” (DA, 2020, p. 1-1).

“An **operational environment** [emphasis added] is the aggregate of the conditions, circumstances, and influences that affect the employment of capabilities and bear on the decisions of the commander (JP 3-0).” (Office of the Chairman of the Joint Chiefs of Staff, 2022a, p. GL-13; DA, 2022, p. 1-16). For Army forces, ... [it] “includes portions of the land, maritime, air, space, and cyberspace domains understood through three dimensions (human, physical, and information) ... Cyberspace, a manmade network of networks, transits and connects the other domains as represented by the dots” (Figure 2) (DA, 2022, p. 1-16).

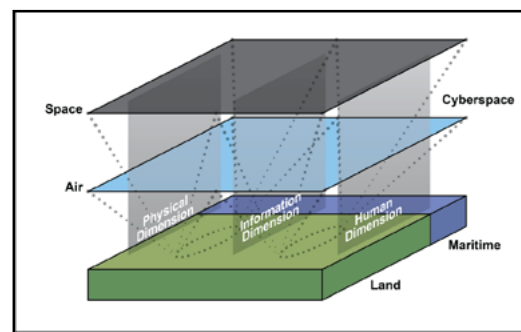


Figure 2. Domains and dimensions of an operational environment (DA, 2022, p. 1-17).

New Operational Environment:

The 2017 FM 3-0 addressed many of the concepts codified in the new version, but it was in a much more convoluted and confusing manner. The new construct is much easier to digest and remember, though the downside is the joint community still

to the tenet of convergence (more on that in a future article).

We must also understand that as the stakes get higher in LSCO, LNOs become ever more critical. A single LNO, either well or misplaced, can

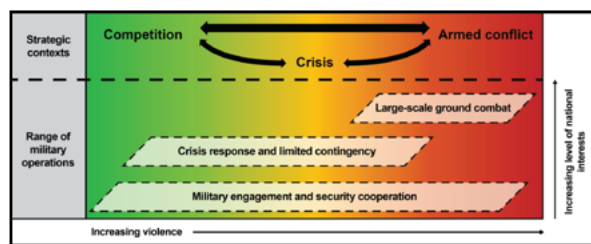


Figure 1. Army strategic contexts and operational categories (DA, 2022, p. 1-14).

⁴ This publication is available via the Army Publishing Directorate, <https://armypubs.army.mil>, with a valid common access card.

⁵ An aviation CPT, MAJ, or field-grade WO walks into the division main or tactical command post, converses with the appropriate people, asks the right questions, collects the right information and graphics, and walks out to go plan and execute the mission. The division staff wonders who that rockstar was before realizing it was their friendly neighborhood aviator! They couldn’t tell it wasn’t an officer from infantry/armor/fires, so adept at doctrinal and tactical concepts across the warfighting functions our aviator was.

⁶ “Multidomain operations are the Army’s contribution to joint campaigns, spanning the competition continuum. Below the threshold of armed conflict, multidomain operations are how Army forces accrue advantages and demonstrate readiness for conflict, deterring adversaries while assuring allies and partners. During conflict, they are how Army forces close with and destroy the enemy, defeat enemy formations, seize critical terrain, and control populations and resources to deliver sustainable political outcomes” (DA, 2022, p. 1-2).

⁷ Field Manual 3-0 describes defeat mechanisms used by division and higher commanders to visualize and describe how they plan to defeat enemy forces. They are: “destroy, dislocate, disintegrate, and isolate” (p. 3-19). Brigade and below “commanders translate defeat mechanisms into tactics,” described in the concept of operations (p. 6-21).

uses the more complicated construct.⁸ The CAC emphasizes that “Army forces mainly operate through the physical dimension, influence through the information dimension and produce victory in the human dimension” (Brito et al., 2022).

Army Aviation is a part of the land force that operates in the lower tier of the air domain. The two domains relate in an example of domain interdependence: Control of the air gives advantages for attacking at long ranges, but air assets require control of the land for secure airfields, maintenance sites, or forward arming and refueling points (FARPs). We also rely heavily on capabilities that reside within space and cyberspace, even more so as our platform technology marches forward. Imagine how much more difficult our missions become when we lose satellite capability for communications, targeting, or navigation. How much does our sustainment architecture rely on network connectivity?

Considerations that impact aviation within the land and maritime domains include how we sequence and position our logistical and communication nodes, and how we are impacted by division and corps land management. While FARPs are probably the first things that come to most of our minds, maintenance, logistical, and retransmission sites are also critical. Against a peer threat, accounting for being under constant observation with minimal sanctuary, we must assume that any land that would be ideally suited for such nodes is easily targeted by the enemy.

Within the air domain, airspace is becoming increasingly congested. No longer can we rely on simple measures like the coordinating altitude to maintain freedom of maneuver; even when we stay low, we’re now competing with friendly and enemy unmanned aircraft systems (UAS) growing ever smaller and more

portable. ‘Big sky, little bullet’ doesn’t work in a swarm, and as anyone who’s ever hit a bird knows, even striking something small, like a group 1 or 2 UAS, can have catastrophic consequences for manned platforms. Additionally, friend or foe identification becomes more critical under MDO, as enemy UAS will have our ground forces watching the skies, no longer assuming everything flying is friendly. Our air and missile defense will be on everyone’s radar (pun intended) much more so in LSCO than it ever was in COIN. When was the last time most of us had to worry about things like passage points or time on target for returning through friendly lines *after* the mission?

New Operational Framework:

The new FM 3-0 returns to an intuitive breakout of assigned operational areas into deep, close, and rear (which in turn houses the support area). The consolidation area is overwritten; however, the concept of consolidating gains is heavily emphasized as a continuous activity throughout MDO in all strategic contexts.

The framework focuses on three models: *assigned areas* (of which the area of operations, or AO, is the primary one most of think of, but it also includes zones and sectors), *deep/close/rear operations*, and *main effort/supporting effort/reserve*. Those who loved the decisive/shaping/sustaining operations model will be disappointed to see it is no longer codified in doctrine.

Of note for aviators are two of the nine listed responsibilities for commanders assigned an AO: personnel recovery

(PR) and airspace management. When facing entities that still consider PR the primary purview of aviators, kindly point out that all commanders with an AO are responsible for it within their boundaries—and planning for it is certainly not the sole responsibility of the AMSO, either! Such commanders are also all responsible for airspace management (not control).⁹ Field Manual 3-0 added a note (page 18) to clarify confusion on the matter.

Army Aviation can rapidly operate across the rear, close, and deep areas of multiple echelons (Figure 3). For deep operations, it is the corps’ responsibility to resource us with the required Army and joint enablers. Aviation, as a rule, must be integrated into all division warfighting function schemes, not just the scheme of maneuver. Spanning the schemes of sustainment and protection, for example, we can’t afford to place a FARP in an area that was recently a position area for

The **operational framework** is “a cognitive tool used to assist commanders and staffs in clearly visualizing and describing the application of combat power in time, space, purpose, and resources in the concept of operations (ADP 1-01)” (DA, 2022, Glossary 10).

An **area of operations** is “an operational area defined by a commander for the land or maritime force commander to accomplish their missions and protect their forces” (DA, 2022, Glossary 3).

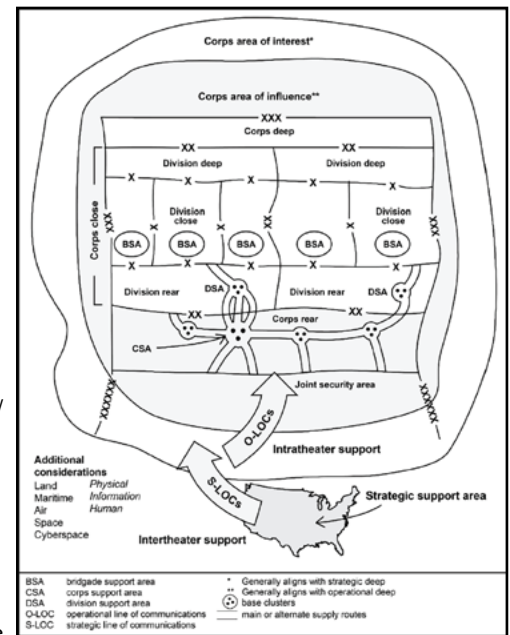


Figure 3. Notional corps deep, close, and rear areas with contiguous divisions (DA, 2022, p. 3-28).

⁸ Field Manual 3-0, p. 1-17, goes with Figure 2: Note, Joint doctrine describes the components of an operational environment as the physical areas of the land, maritime, air, and space domains; the information environment (which includes cyberspace); the electromagnetic spectrum ... with physical, informational, and human aspects” (p. 1-21). (See JP [Joint Publication] 2-0 and JP 5-0 [located at the common access card enabled site: <https://jdeis.js.mil/jdeis/>] for more information on describing and analyzing an operational environment from a joint perspective).

⁹ There are misconceptions within the Army that commanders control the airspace within their AO; however, that airspace is owned by the joint force commander, who appoints the Airspace Control Authority, who develops an Airspace Control Plan (JP 3-52, p. vii). Even with the definitions used herein, it can be tricky to wrap one’s mind around the difference between Airspace Control vs. Management. Most of us should be familiar with the difference between positive and procedural control. This note from JP 3-52 [page 1-5, emphasis added] helps a bit: “Procedural control provides effective airspace management in areas that lack positive control capability.” Joint Publication 3-52 also notes, [page 1-6] “Emphasis should be placed on simple, flexible airspace management procedures that require minimal communications” and [p. IV. 9] “Integration of fires and aircraft is a critical part of airspace management.”

So perhaps a simple way to describe the nuances: Airspace Control is the authority and decisionmaking regarding airspace, whereas management is the technique(s) used to exercise and enforce that authority. As an example: Airspace Control tells the aviator to use a specific corridor of specific dimensions, and Airspace Management is whether we’re directed through (positive control) or self-directed (procedural), and how much we’re talking on the radio to do so. Either way, we’re using the corridor we’re supposed to be, regardless of how we are managed.

artillery and is thus already targeted by the enemy! Therefore, planning becomes more detailed with enemy focus and analysis trumping convenience. Participating in all the division working groups is even more crucial in LSCO than it

scheduled, let alone unscheduled, maintenance? How frequently are we really going to jump, as compared to ground maneuver battalions and brigades, considering the additional infrastructure aviation relies on? Though helicopters

come of *multiple actions* across *multiple echelons* from *multiple domains* against *multiple decisive points*. In MDO, where we seek often-incremental relative advantages, a single decisive point is not enough to achieve our objectives. Convergence also reinforces the concept of domain interdependence: The better we understand the relationships among capabilities across all domains, the better we can combine them in “surprising, effective tactics that accrue advantages over time” (DA, 2022, p. 3-3). As the division’s most maneuverable element, aviation can expect to play a vital role in convergence.

Note. A land AO by definition does not include a volume of airspace to control. Airspace control authorities delegate airspace control to Army commanders based on the situation. All commanders must be prepared to enable or coordinate airspace management. (See JP 3-52 and FM 3-52 for more information on airspace control.)¹⁰

was in COIN and synchronizing all the warfighting functions takes us back to that conversation about LNOs and how important they are.

Aviation deep operations will primarily be shaping for either division or corps, whereas our close operations enhance the survivability of the combined arms team. We must not allow ourselves to get into a one-on-one survivability discussion, where ground forces may try to argue that a helicopter is no match for enemy air defense in a peer fight. It is aviation capabilities in the aggregate, enabled through MDO by higher echelon and joint assets, that enhance land force survivability! Additionally, our rear operations can greatly enhance the division’s security and sustainment operations.

Another implication for our branch to work through under MDO is how far back from the forward line of troops should we position our battalion and brigade tactical assembly areas, and how dispersed should they be? What about our aviation support battalion? Where do we expect to perform major

don’t require improved airfields, our UAS platforms need specific amounts of improved surfaces for launch and recovery, to say our fuel demands are large would be an understatement, and our current and projected modified tables of organization and equipment are insufficient for organic protection. These are problems we need to work out in the short term, since doctrine covers current capabilities, not concepts (such as future vertical lift or launched effects).¹¹

New Tenets and Imperatives: The four tenets—agility, convergence, endurance, and depth—fall into the “should” category; whereas the nine imperatives fall under the “must” category. The initial aviation implication is the core competency-tenet/imperative crosswalk depicted in Figure 4.

Agility refers not just to physical maneuver, but also the ability to task organize more rapidly (something aviation forces have gotten used to), make decisions faster than the enemy can (links to the imperative of decision dominance), and execute smoother, more rapid transitions.

Convergence, in a nutshell, is the out-

Endurance is more than just sustainment and ensuring a unit doesn’t culminate (though aviation can certainly help with that problem!). It also includes protection considerations to ensure enough combat power is preserved for subsequent main efforts.

From the newly published JP 3-52, 2022b, “Joint Airspace Control”
“Airspace Control: the exercise of delegated authority over designated airspace and users through control procedures and coordination measures (CMs) to maximize operational effectiveness” (p. GL-4).

Available at common access card enabled site:
<https://jdeis.js.mil/jdeis/index.jsp>

Though not explicitly stated in FM 3-0, endurance also ties in with the ninth imperative, *understanding and managing the effects of operations on units and leaders* (p. 3-8). This is where the Aviation Branch has an advantage in its years of understanding the risks associated with acute and chronic fatigue and a culture of fighter management.

Whereas endurance focuses on friendly combat power, depth orients on enemy dispositions across all domains. It is described in terms of operational reach, an area where aviation certainly contributes to the combined arms team! Whether the division or corps commander chooses to exercise our reconnaissance, attack, air assault, or a combination thereof our

Airspace Management:
“The planning, coordination, integration, and regulation of airspace by airspace control elements in support of airspace control” (p. GL-4).
Available at common access card enabled site:
<https://jdeis.js.mil/jdeis/index.jsp>

¹⁰ See JP 3-52 [common access card enabled site: https://jdeis.js.mil/jdeis/new_pubs/jp3_52.pdf] and FM 3-52 [located at https://armypubs.army.mil/epubs/DR_pubs/DR_a/pdf/web/FM%203-52%20FINAL%20WEB.pdf] for more information on airspace control” (DA, 2022, p. 3-24).

¹¹ Army Doctrine Publication 1-01, “Doctrine Primer,” para. 1-5 provides the Army definition of doctrine: “fundamental principles, with supporting tactics, techniques, procedures, and terms and symbols, used for the conduct of operations and as a guide for actions of operating forces, and elements of the institutional force that directly support operations in support of national objectives.”

Paragraph 1-7 describes concepts as, “ideas for a significant change based on proposed new approaches to the conduct of operations or technology.” They “propose significantly different methods the force might use in the future, usually 5 to 15 years hence. The Army evaluates concepts through a series of tests. Over time, the Army discards some concepts and keeps others.” Most importantly, “leaders and Soldiers should avoid confusing concepts with doctrine. Concepts are proposals and the basis for experiments on conducting future operations whereas doctrine addresses how Army forces actually operate today.”

core competencies, we amplify depth for the ground forces.

Other Changes

Contested Deployments: The 2022 FM 3-0 adds an appendix on contested deployments, acknowledging that peer threats are already influencing the continental United States within the cyber domain and through the information dimension in the context of competition. Paragraph C-5 states, “Adversaries take steps to deliberately obscure the source of these activities, and they take full advantage of the ambiguity provided by operating below the threshold of armed response.” Should we move to crisis or conflict, we can expect our adversaries turned enemies to employ more overt means across even more domains and dimensions.

Considering how much of the critical infrastructure needed to deploy is civilian owned/managed (e.g., rails, ports), this is a significant vulnerability. Army Aviation relies heavily on

contractors to get us from fort to port, most notably in the sustainment warfighting function. Consider how mobile, with only organic assets, any of our companies are, let alone battalions (let alone the aviation support battalion)—we contest ourselves without any aid from the enemy! Though we can rather easily, all things considered, self-deploy our aerial combat power to the port of embarkation, we still rely on boats or strategic airlift to move us to the port of debarkation (POD). And that doesn’t help us for all of our ground equipment and rolling stock, which even without an adversary or enemy interfering, would hit enough friction on bridge load capacity and congested roads and rails. Then, we face the same challenges moving from the POD to the RSOI (reception, staging, onward movement, and integration of forces)

sites. Major aviation implications include:

“Adversary:
a party acknowledged as potentially hostile to a friendly party and against which the use of force may be envisaged” (Office of the Chairman of the Joint Chiefs of Staff, 2022a, p. GL-7).

“Operational reach: the distance and duration across which a force can successfully employ military capabilities (JP 3-0)” (Office of the Chairman of the Joint Chiefs of Staff, 2022a; 2022c).

Enemy:
“a party identified as hostile against which the use of force is authorized ... also called a combatant and is treated as such under the law of war” (DA, 2019b, p. 1-3).

- How do we balance home station capacity/operations to support ground force deployment with our capacity that needs to get to theater?
- Who provides security at civil and military logistical nodes?
- Can we effectively navigate cross-country without global positioning systems? How would we operate in instrument meteorological conditions if the civil air traffic control network were attacked?
- How do we sequence our aircraft/assets to each port, across multiple avenues of approach using diverse fuel stop locations? Do we have contingencies to address civilian aviation fuel shortages?

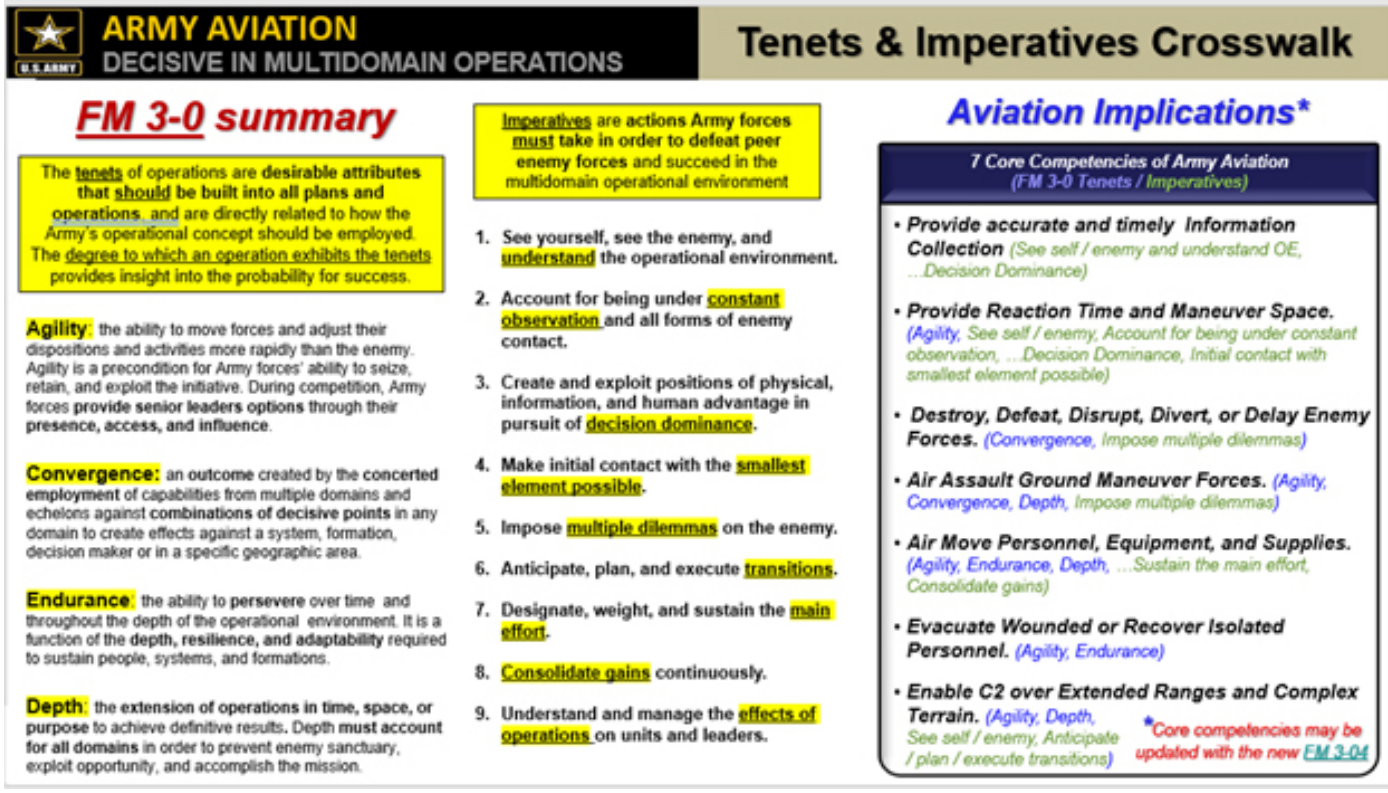


Figure 4. Field manual 3-0 tenets & imperatives crosswalk (Combined Arms Center, 2023; MacKnyght, 2023).¹²

¹² More information on these resources may be found in the FM 3-0 Outreach section of this article.

- How many options do we need per port of where to physically prepare aircraft for shipment/build them up upon arrival?

- How do we sequence our aircraft/equipment by platform/quantity across simultaneous strategic airlift, sealift, and self-deployment?

- How much do we rely on civilian capabilities, such as materials handling equipment, stevedores, rail en route and at port, etc., and do we have priority when we need it?

- Will we face eroded public and civil support due to enemy information operations?

Maritime Environments: Though a domain in its own right, FM 3-0 points out that “in almost all cases it is land that makes a maritime area important” (DA, 2022, p. 7-1). Aviation implications of operating in a maritime environment are most notably the increase in complexity of sustainment planning: How do we position maintenance assets? Can we adapt FARP operations to include Fat Hawk/Cow¹³ as primary means?

Prior to arriving, overwater training at home station will be critical. This means addressing equipment availability, crew currency, and increased commander dialogue regarding risk tolerance to allow such training. Additionally, multi-service multidomain training will become ever more critical. Examples include the Naval Air Tasking Order/Airspace Control Order, joint logistics and basing, and even things so simple as ensuring we can effectively talk with each other, be it the physical dimension of technical radio compatibility or

human dimension of speaking the same doctrinal language.

Forms of Contact Update: The new FM 3-0 adds Influence to make

it nine forms of contact and

notes that in all contexts,

“Army forces are typically in continuous visual, electromagnetic, and influence contact with adversaries” (DA, 2022, p. 3-11). This aligns with the second imperative, “Account for being under constant observation and all forms of enemy contact” (DA, 2022, p. 3-8).

“Influence [emphasis added]: interactions through the information dimension intended to shape the perceptions, behaviors, and decision making of people relative to a policy or military objective (including through social media, telecommunications, human interaction, and other forms of communication)” (DA, 2022, p. 3-11).

Mission Variables Update:

We’re all well-versed in the mnemonic METT-TC, and those of us who’ve been in the Army long enough (or have served with the U. S. Marine Corps) may even remember METT-T. The new FM 3-0 modifies this well-worn mission variables acronym: it is now METT-TC(I). The “I” stands for informational considerations, in line with information being one of the three dimensions affecting all five domains. Why the parentheses, you ask?

Note. METT-TC (I) represents the mission variables leaders use to analyze and understand a situation in relationship to the unit’s mission. The first six variables are not new. However, the pervasiveness of information and its applicability in different military contexts requires leaders to continuously assess its various aspects during operations. Because of this, “I” has been added to the METT-TC mnemonic. Informational considerations are expressed as a parenthetical variable because they are not an independent consideration, but an important component of each variable of METT-TC that leaders must understand when developing understanding of a situation.

(DA, 2022, p. 1-23).

Since we’re living in a no-growth Army, we could not buy a vowel, so the E was harvested from CBRNE in exchange; just use CBRN when talking about chemical, biological, radiological, and nuclear operations! All joking aside, CBRNE still has a home in ATP 3-37.11, “Chemical,

Biological, Radiological, Nuclear, and Explosives Command (CBRNE Command)” (DA, 2018),¹⁴ but should not be a term we use in the aviation or maneuver world.

Greater Emphasis on Defeating in Detail:

Because peer threats are harder to attack all at once, we must find their weaknesses and exploit them, whether our operations focus on a specific enemy function, capability, echelon or unit, domain, or dimension. When “enemy vulnerabilities and friendly advantages intersect at a single place and time [in a way] that is decisive to mission accomplishment” (DA, 2022, p. 3-19), we have identified a decisive point. Army Aviation can both help identify and exploit decisive points, presenting the ground force commander multiple options for imposing multiple dilemmas to the enemy. The new FM 3-0 also modifies several of the defeat mechanisms (destroy, dislocate, disintegrate, and isolate); we’ll expound on those in the next *Aviation Digest*.

Conclusion

Army Doctrine Publication 1-01, “Doctrine Primer,” states it takes up to 5 years for doctrinal change to permeate the force (DA, 2019a, p. 2-6), and FM 3-0 was republished 5 years to the month after the most previous version. However, considering the depth and breadth of outreach materials CAC has

provided (listed next), that time should be significantly cut, as it’s never been easier to digest new doctrine. The new FM 3-0 builds upon concepts familiar to the old but in a much more user-friendly manner (it doesn’t hurt that the new one is almost 90 pages shorter!). The aviation

¹³ Aerial emplaced FARPs. From ATP 3-04.17, “Techniques for FARPs” (2018), “The CH-47’s extended range fuel system (ERFS) II, also known as Fat Cow, is a modular, interconnectable system. The primary mission is to provide a safe and convenient means of increasing the range and endurance of the CH-47D helicopter to include—

• Worldwide self-deployment capability.

• Transporting fuel for forward area refueling operations” (p. 2-20).

Paragraph 2-61 continues, “Similar refueling operations can be accomplished with the UH-60 [Fat Hawk]. The [Advanced Aviation Forward Refueling System] AAFARS is carried inside the aircraft while fuel is extracted from the aircraft’s external or internal fuel tanks” (p. 2-21).

¹⁴ A fun little rabbit hole: “Chemical, biological, radiological, nuclear, and explosives are components that are threats or potential hazards with adverse effects in the operational environment. The explosive component incorporates the full range of explosive ordnance hazards (including IED [improvised explosive device] and WMD [weapons of mass destruction] threats)” (DA, 2018, p. 1-1). The CBRNE Command was activated during COIN operations in 2004 to meet the requirement for a WMD elimination program. Thus, as an expeditionary command, it managed CBRN and explosive ordnance disposal assets, hence CBRNE with the “E.” The rest of Army, multi-service, and joint doctrine we could find use CBRN, and have for quite some time. So, if you’re still using CBRNE in your common vernacular, you can revert to CBRN!

considerations discussed in this article will hopefully serve as professional conversation-starters, so please, continue the dialogue and write to the *Digest!* Or at least, pull up the NOTAMs section in the front and write to the Doctrine or Tactics Branch directly; we are always looking for feedback from the field.

FM 3-0 Outreach:

- <https://usacac.army.mil/organizations/mccoe/FM3-0Resources> : scroll down for a hyperlinked list of FM 3-0-specific **Doctrine Digest YouTube series** (The Combined Arms Doctrine Directorate channel is: youtube.com/@usacadd).

- **Breaking Doctrine podcasts** (available on Apple or Google podcasts):

- o 15SEP's episode (#34) discusses the new "(I)" in mission, enemy, terrain, troops, time, and civilians, or METT-TC(I).

- o #36, 15DEC: FM 3-0 Writing Team Talks

- o #37, 15JAN: FM 3-0 Implementation

- o Apple: Breaking Doctrine on Apple Podcasts [<https://podcasts.apple.com/us/podcast/breaking-doctrine/id1522992251>]

Defeat in Detail:
"Is concentrating overwhelming combat power against separate parts of a force rather than defeating the entire force at once (ADP 3-90)" (DA, 2022, p. 3-19).

- o Google: Breaking Doctrine (google.com) [<https://podcasts.google.com/feed/aHR0cHM6Ly9wb2RjYXN-0LmJsb2IuY29yZS51c2dvdnNsb-3VkJXBPm5ldC9jYWRkL0JyZW-FraW5nX0RvY3RyaW5lLnhtbA>]

- **Three published articles on FM 3-0:**

- o <https://www.ausa.org/articles/world-changes-updated-field-manual-focuses-multi-domain-operations>

decisive point:
"Key terrain, key event, critical factor, or function that, when acted upon, enables commanders to gain a marked advantage over an enemy or contribute materially to achieving success. (JP 5-0)" (DA, 2022, p. Glossary 5).

- o <https://www.armyupress.army.mil/journals/military-review/online-exclusive/2022-ole/musicians-of-mars-in-multiple-domains/>

- o <https://mwi.usma.edu/an-army-at-sea-why-the-new-fm-3-0s-emphasis-on-maritime-operations-is-so-important/>

- **Field Manual 3-0 video:** Following an introduction by CAC and Fort Leavenworth, Kansas, CG, LTG Milford H. Beagle, Jr., and Mr. Rich Creed, Director, Combined Arms Doctrine Directorate, explain the new FM 3-0 and the Army's operational concept, MDO. This feature-length video delivers the same brief given by mobile training teams to familiarize Army forces with the new manual. View on YouTube at

<https://www.youtube.com/watch?v=QFYjO3XHd3Q> or the Central Army Registry at https://rdl.train.army.mil/catalog-ws/view/100.ATSC/75C1AA17-7392-40DC-9503-E5DC3BBF1B12-1675177928721/FM_3-0_Operations_MTT_Video.mp4

Above the Best!

Biography:

LTC Julie MacKnyght is the chief of the merged Doctrine and Tactics Divisions (DTAC), DOTD, and is thankful for all the smart people who keep everything moving forward on a daily basis. Her previous experience spans three company commands (Headquarters and Headquarters Troop (HHT), Task Force ODIN, Iraq; HHT, 21st Cavalry Brigade, Fort Hood, Texas; Company A, 1st Battalion, 145th Aviation Regiment, Fort Rucker [Novosell], Alabama), two battalion executive officer tours (The 1st Air Cavalry Brigade's 3D Battalion, 227th Aviation Regiment and 615th Aviation Support Battalion, Fort Hood, Texas, and Illesheim, Germany), and duties as the chief, USAACE Commander's Initiative Group. She has served as a pilot-in-command in the OH-58D, LUH-72A, and UH-60M, and her daughters (ages 1, 3, and 7) keep life supremely interesting!



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