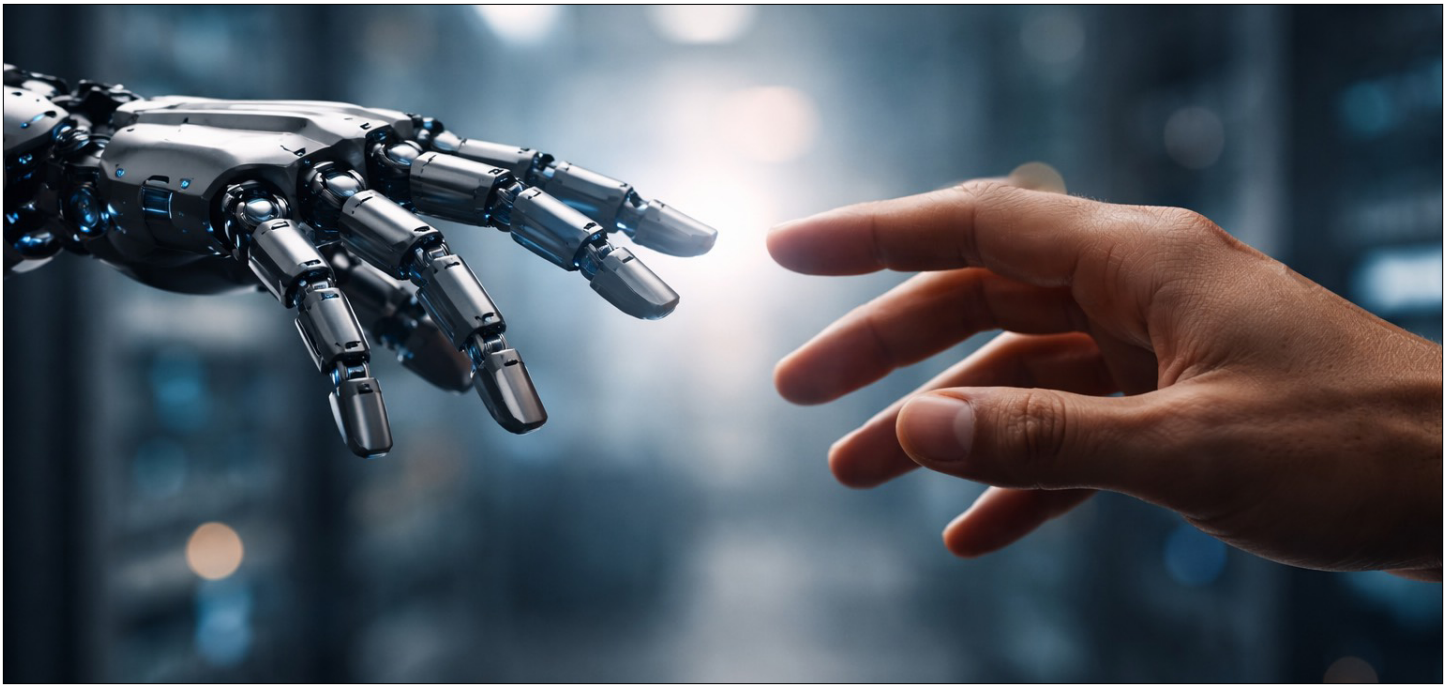

(Illustration generated by ChatGPT).

Court Is Assembled

Forging the Bimodal Judge Advocate
Human-Machine Integration and the Future of the JAG Corps

By Colonel Ryan A. Howard

My military education and experience in the First World War have all been based on roads, rivers, and railroads. . . . During the last two years, however, I have been acquiring an education based on oceans, and I've had to learn all over again. It became clear to me . . . I would need to learn new tricks that were not taught in the military manuals or on the battlefield . . . I must become an expert in a whole new set of skills. — General George C. Marshall [1]

Artificial intelligence (AI) is driving a revolutionary transition from the information age to a cyber-physical age, where data and physical domains will fuse, enabling machines to perceive, learn, decide, and ultimately act.[2] The National Security Commission on AI best described the scale of this transformation:

> No comfortable historical reference captures the impact of AI . . . . [It] is not a single technology breakthrough . . . . [It] is not like the space race to the moon. . . . [It] is not even comparable to a general-purpose technology like electricity. However, what Thomas Edison said of electricity encapsulates the AI future: "It is a field of fields . . . it holds the secrets which will reorganize the life of the world."[3]

Virtually every industry and government sector will be impacted by AI—many are already profoundly disrupted. Within the manufacturing sector, six-foot bipedal humanoids are currently operating autonomously in warehouses and factories.[4] In Texas, commercial self-driving trucks transport goods between Dallas and Houston, driving hundreds of miles multiple times each week.[5] The Army

is also leaning into this groundbreaking opportunity; a Soldier, with no aviation education or training, recently flew an optionally piloted Black Hawk helicopter using a handheld tablet.[6] In this context, growing numbers of judge advocates (JAs) are currently advising clients on the development and employment of AI capabilities.

For its part, the legal profession is aggressively embracing AI. Moving beyond research and writing, law firms are now assessing how to automate workflows and leverage agentic-AI.[7] In parallel, prospective clients are pivoting from law firms toward procuring their own AI legal capabilities.[8] With innovative disruption impacting both the profession of law and the profession of arms, the task before us is momentous. *How should the Judge Advocate General's (JAG) Corps responsibly leverage AI*?

Army lawyers have both professional responsibility and profession of arms obligations to integrate emerging technologies into their practice of law. Doing so will require a reimagining of JAG Corps structures, processes, and professional identity. The JAG Corps must immediately transform its information technology (IT) and position itself to modernize its legal practice through strategic leadership, astute planning, technical advancement, world-class education, and professional reflection. The JAG Corps's competitive advantage is the bimodal JA who expertly leverages AI through human-machine integration and who can effectively operate without AI in austere operating environments.

This article offers a roadmap for JAG Corps AI integration that unfolds over four planning horizons: an immediate modernization of JAG Corps enterprise architecture, a near-term AI-*enabled* legal practice, a medium-term AI-*operated* legal practice, and a long-term AI-*managed* legal practice. These hypothetical scenarios aim to capture the rising tension between AI's advancing capabilities and their implications for the legal profession. Each horizon invites the reader to step into a specific future context to explore opportunities and assess risks. Significantly, the technology in this article, other than artificial general intelligence (AGI), already exists and is in widespread use across industry and government. Finally, our discussion concludes by exploring the JAG Corps's response to this evolving operating environment—an enterprise commitment to developing bimodal JAs capable of operating with and without AI. This article is a call to action. JAG Corps thought leaders should immediately begin thinking, hypothesizing, and debating within the context of each time horizon: *how should the JAG Corps approach an AI-enabled, AI-operated, and AI-managed legal practice*?

JAG Corps 2025
Setting the Conditions for Integrating AI

With rapidly advancing technology and new challenges emerging throughout its legal operations, JAG Corps senior leaders recognized the need to transform its IT capabilities to enable a modern legal practice. Accordingly, the JAG Corps established the IT Operational Planning Team (IT-OPT) in October 2024 to identify capability gaps and create a blueprint for the Corps's future. Our goal is to modernize the JAG Corps's enterprise architecture (EA) and enable sound knowledge management (KM) to align our technology, data, people, and operations. This initial phase is critical—any technical errors will undermine AI integration and slow the modernization of our legal practice.

In June of 2025, the IT-OPT completed a strategic current-state analysis of the JAG Corps's EA, encompassing technology, applications, data, and governance.[9] Our assessment revealed significant organizational strengths, including a talented workforce and extensive high-quality data assets that will enable IT modernization.

The IT-OPT also identified significant opportunities. First, the JAG Corps will address connectivity gaps between users, applications, and data to realize total force integration. Second, the JAG Corps will rationalize its suite of applications.[10] Third, the JAG Corps will address its data, which is currently stratified by organization and siloed by legal function, undermining the data visibility and accessibility required to train AI models effectively.[11] Finally, the JAG Corps will establish the governance layer of its EA, including executive IT leadership, a comprehensive IT strategy, and specific IT policies that create foundational standards, systems, and procedures. With significant improvements to applications, data, and governance, the JAG Corps will be postured to integrate AI capabilities into legal operations. But modernizing the EA is not in and of itself sufficient; the JAG Corps must drive a fundamental shift in organizational strategy to exploit AI's potential.

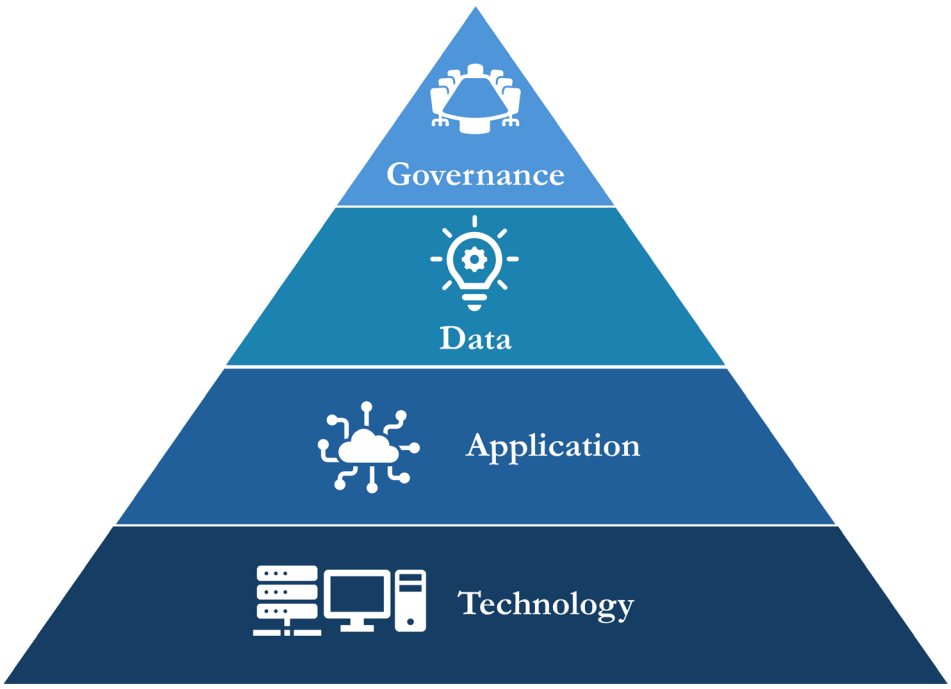

Figure 1. Enterprise Architecture (Credit: COL Ryan A. Howard)

While much has been written about the AI revolution, it's worth emphasizing the breadth and depth of its impact. AI is a *radical innovation* that transcends technology—it is a transformative breakthrough that will disrupt entire industries and reshape society.[12] AI will not simply introduce new capabilities; it will reconfigure processes, redefine professional roles, and alter decision-making dynamics.[13] Institutions that succeed will acknowledge this new reality, make difficult decisions, and leave outdated approaches behind. Institutions that resist, however, will not merely plateau; they will collapse, undermined by half-measures aimed at preserving fading paradigms.[14]

The JAG Corps now stands at an inflection point. For the JAG Corps to navigate this *creative destruction,* it must be willing to overhaul traditional approaches, established systems, and long-standing organizational structures.[15] The JAG Corps *will* meet this moment through visionary leadership, proactive strategic planning, and a sustained institutional commitment to modernizing our enterprise architecture.

JAG Corps 2029
The AI Legal Assistant: An AI-Enabled Legal Practice

Vignette

It is the summer of 2029, and the JAG Corps has incrementally deployed AI "legal assistants" capable of delivering high-quality decision-support. Following three years of EA modernization, the Corps now operates on aligned applications, data, and workflows. These AI systems perform at the level of an experienced paralegal; they augment the human practice of law by resolving administrative matters and enabling many routine legal activities.[16] Throughout the JAG Corps, AI chatbots serve as the first line of legal triage. These systems screen non-legal issues; retrieve, organize, and label relevant documents; and respond to basic questions concerning authorities and procedures. More robust AI applications, trained on applicable law, policy, and regulation, analyze legal issues and draft detailed, context-specific legal opinions for attorney review and approval. JAG Corps leaders employ AI management tools to accelerate and resolve virtually all administrative processes.

These JAG Corps initiatives are advancing within the strategic context of Army modernization. AI-enabled systems now support most staff and warfighting functions, from information management and running estimates to drafting orders and conducting risk assessments.[17] The deployment of the AI "Enhanced Common Operating Picture," integrated with staff systems and thousands of multimodal sensors, provides commanders with near real-time situational awareness.[18] Command update briefs have shortened markedly, and traditional command and staff meetings have virtually disappeared. Finally, the resolution of routine "authorities" questions has shifted from the JAG Corps to the responsible staff proponent. AI-enabled staff tools now allow commanders and staff officers to resolve their own questions concerning policy, regulation, and doctrine.

The integration of AI "legal assistants" has measurably strengthened the JAG Corps's legal practice and accelerated core workflows. Early assessments indicate that AI applications supporting specific legal functions can generate draft products with a high degree of consistency within minutes of receipt. These efficiencies have eased long-standing personnel pressures: With administrative and routine matters largely automated, the Corps can direct its human capital toward a more focused set of legal functions aligned with Army operational demands. Legal reviews are leaner and faster, and the added tempo allows commanders and staff judge advocates (SJAs) to devote greater attention to leadership and professional development.

As AI systems mature, conventional staff responsibilities are narrowing, and Army processes, roles, and force structure are evolving. Human JAs increasingly concentrate on reviewing AI-generated products, while continuing to provide in-person counsel to commanders. Broader legal-industry trends suggest that AI adoption has reduced demand for certain categories of legal work, while increasing demand for new practice areas. By 2029, AI will have replaced 15 percent of the legal professionals in the broader legal industry.

Strategic Framework

Having described the expected legal-technological environment in 2029, this section offers an organizational path to AI integration. For the JAG Corps to field AI-enabled "legal assistants" capable of decision-support, it will successfully execute a coordinated campaign plan to close IT capability gaps, align the EA, and modernize legal applications for AI integration. This plan unfolds across four lines of effort: (1) organizational restructuring; (2) strategy and policies; (3) enterprise-architecture design; and (4) modernization of applications.

First, the JAG Corps will establish the leadership and organizational structures required to direct and sustain enterprise-wide modernization. This begins with establishing an Executive IT Leader to spearhead technical strategy, cross-enterprise alignment, and cultural change. Additionally, the JAG Corps will create an enabling staff of technology and data experts to oversee KM, process mapping, machine learning, technical training, and Army integration. Finally, the JAG Corps will identify forward leaders embedded within offices of the staff judge advocate (OSJAs) to implement IT guidance and data management at the installation level. This realignment is foundational: without sufficient authority, human capital, and resourcing, IT modernization efforts will fail to scale or endure.

Second, the JAG Corps will establish a coherent IT strategy, governance framework, and doctrinal foundation aligned with JAG Corps and Army guidance. These modernization documents will articulate the vision and mission, establish sound IT resourcing processes, and set enforceable KM standards. Significantly, the JAG Corps will adopt an AI governance policy that operationalizes the responsible use of AI systems consistent with professional responsibility precepts.[19] Modernizing talent management is equally critical. Integrating IT, EA, KM, and AI competencies into JAG Corps career models will cultivate a force capable of leveraging and supervising AI systems, while ensuring compliance with legal, ethical, and policy requirements.

Third, JAG Corps IT planners, working closely with Army IT counterparts, will design a future-state EA that supports AI systems. This architecture can be conceptualized as an "AI stack," in which the computing

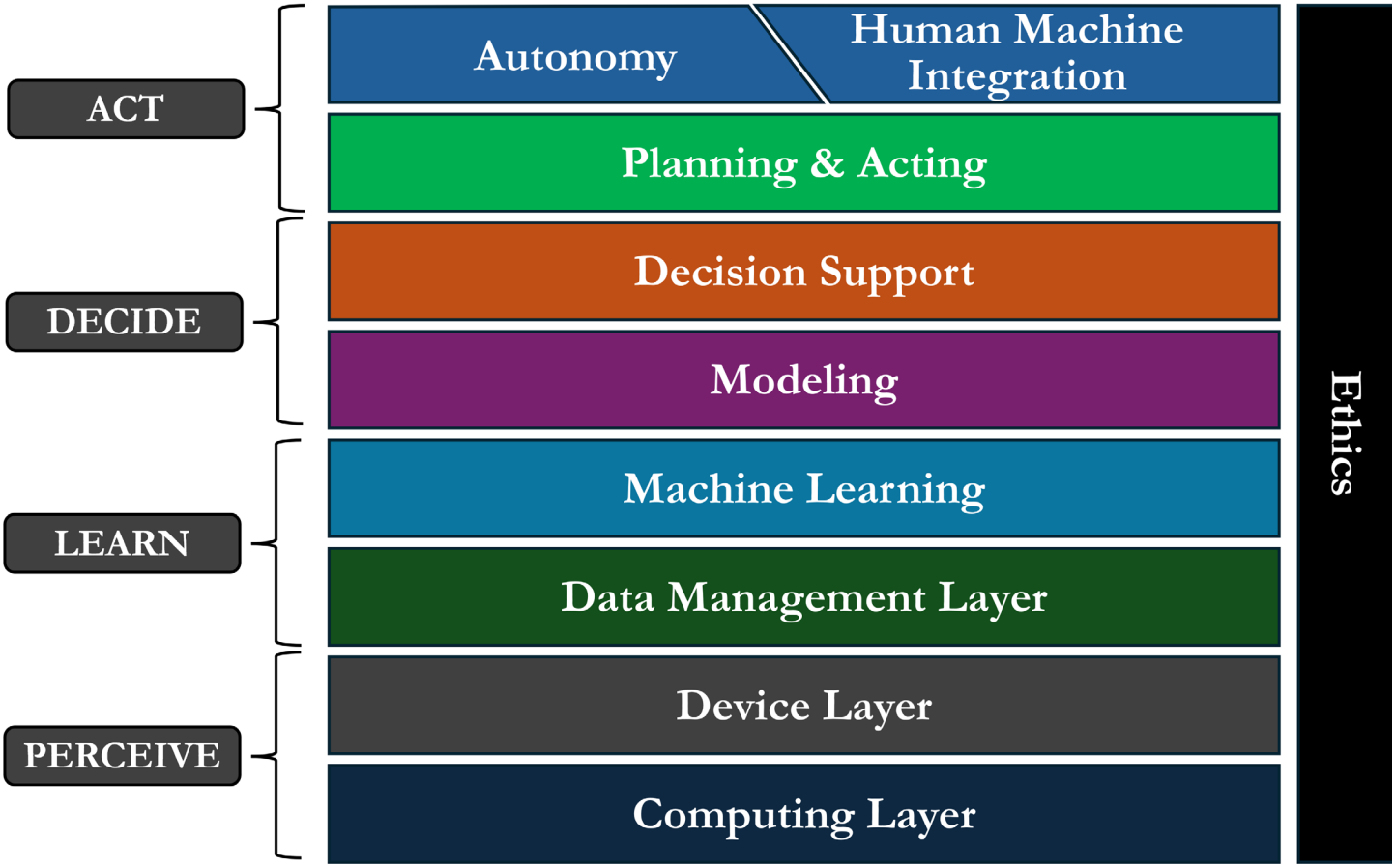

Figure 2. The "AI Stack." (Credit: COL Ryan A. Howard)

and device layers support the data management and machine learning layers, which in turn enable modeling, decision-support, planning, acting, and, ultimately, autonomous processes.[20] Because each layer depends on the integrity of the one beneath it, even minor defects in hardware integration, data quality, or model design will cascade upward, degrading system performance and eroding trust. Therefore, designing this architecture is a vital technical and institutional task.

Finally, the JAG Corps will modernize its applications. The JAG Corps will develop detailed requirements for desired capabilities, informed by practitioners in the field, market research, and coordination with the Army IT enterprise. Additionally, the JAG Corps will evaluate its existing applications and recommend whether each system should be retired, upgraded, or replaced. After synthesizing their market research and application analysis, IT planners will staff a future-state blueprint and a consolidated, prioritized list of IT recommendations for JAG Corps senior leader guidance and approval. In parallel, the JAG Corps will launch a comprehensive data-management initiative. A JAG Corps data-governance council will promulgate standards and guide the adoption of centralized platforms to facilitate data curation and storage.[21] This approach will enable key stakeholders to inventory, assess, migrate, and label the JAG Corps's knowledge stores, creating the data infrastructure needed for reliable and auditable AI performance.

Implications and Considerations

Realizing the benefits of AI decision-support requires a coherent framework for AI deployment and corresponding adjustments to JAG Corps force structure and talent management. First, the JAG Corps should establish an AI-employment framework that guides when, where, and how AI should be utilized. The JAG Corps, led by legal function leads, should evaluate prospective AI use by applying four criteria: accuracy, efficiency, complexity, and ethics.[22] While routine administrative activities may be fully automated, the vast majority will require hybrid processes with mandatory human review, and certain tasks should remain exclusively human because they implicate nuanced or core legal judgment.

Looking ahead, the JAG Corps should conduct a strategic assessment of its force structure and human capital. As AI assumes a greater share of routine legal work, the JAG Corps should anticipate displaced traditional tasks, emerging new activities, and corresponding organizational changes. This analysis should inform a forward-looking talent management model that develops, hires, and contracts for new skill sets, including KM and AI system administration. The JAG Corps *will* successfully integrate AI decision-support systems that augment human JAs. To do so, the JAG Corps must modernize its EA, develop or procure AI capabilities, and evolve its force structure, while

(Illustration generated by ChatGPT).

cultivating a workforce capable of integrating and employing AI.[23]

JAG Corps 2032
Agentic AI Legal Advisors: An AI-Operated Legal Practice

Vignette

It is the spring of 2032, and the JAG Corps has crossed a historic threshold—the deployment of *agentic AI* "legal advisors" capable of autonomous decision-making.[24] This milestone occurs amid acute fiscal pressure. With the national debt reaching $47 trillion, the Federal Government has imposed sweeping austerity measures, and the executive branch is fundamentally rebalancing the active-duty force, mandating a three-to-one tooth-to-tail ratio—an inversion of the longstanding support-heavy model. The demand for efficiencies has accelerated the institutional embrace of AI across warfighting functions, including legal operations.

Years of decentralized innovation have consolidated into a small set of powerful *foundation models* trained on vast legal *data lakes*, detailed automated workflows, millions of structured training simulations, and extensive *human reinforcement learning*.[25] Out of that context grew agentic AI systems that learn and adapt. These cutting-edge systems no longer merely enable human attorneys; they provide legal advice within the scope of delegated authorities. Agentic-AI systems now act as junior associates—autonomously managing workflows, conducting legal research, executing e-discovery, analyzing legal issues, drafting legal documents, and issuing legal opinions.[26]

Agentic AI initiatives have also dramatically advanced staff and warfighting functions across the Army. The "G-Staff" agentic AI systems act as autonomous staff officers over routine tasks: updating and synthesizing running estimates, integrating warfighting function inputs, detecting anomalies, and generating coordinated recommendations for command decision. The G-1 agentic AI system handles most personnel matters, including certain adverse administrative actions. For example, it assembles evidence, verifies regulatory sufficiency, and issues reprimands, leaving only the filing decision to the human commander. The JAG Corps is simultaneously piloting an agentic AI system that adjudicates low-value claims and administrative contract disputes, employing predictive analytics to increase speed and consistency.

Agentic-AI has dramatically altered the practice of law. In the private sector, substantial legal activity has shifted from traditional law offices to client-facing AI applications. Within the Federal Government, legal review is now embedded directly within many workflows. The law functions as a control input rather than a post hoc check; agentic AI validates legal compliance as "the action" is assembled, drafted, coordinated, and approved. Consequently, the role of the human JA has shifted toward

higher-order judgment, overseeing agentic AI systems and providing strategic legal advice to senior Army leaders. Across the legal industry, AI has displaced 25 percent of legal professionals.

Strategic Framework

To realize this future, the JAG Corps will elevate its ambitions and further evolve its strategy. Its next IT campaign plan will field agentic AI systems tailored to each legal function and capable of autonomous action within defined parameters. Building on its robust technology and data infrastructure, the JAG Corps will enhance its capabilities by integrating agent platforms into its EA and embedding them within core legal systems, enabled by diverse legal and administrative data sources.[27] Significantly, the JAG Corps will redesign legal workflows: IT planners will map processes, identify friction points, select appropriate AI models, automate sequences, and identify human review touchpoints.[28] Before full-scale deployment, the JAG Corps will conduct controlled pilot programs and iterative refinement to fine-tune the system's reliability and operational suitability.

Implications and Considerations

As our hypothetical shifts from an AI-*enabled* legal practice to a plausible agentic AI-*operated* legal practice, the JAG Corps must understand the ramifications and establish a methodology that reconciles the value proposition with the associated risks. The introduction of agentic AI into legal processes contemplates AI systems operating independently from human attorneys. If the JAG Corps decides to make this technological leap, it must closely coordinate with both AI architects to engineer oversight into agentic AI systems and Army senior leaders to maintain their trust. The JAG Corps should establish an Agentic AI Approval Board (AAAB) to approve the deployment of agentic AI systems based on proposals from legal function leads and technical input from IT experts.[29] Legal function leads will identify candidate agentic AI processes. Each proposal should specify the legal tasks that agentic AI will perform and the proposed level of autonomy for each step in each process.[30]

In contrast to AI decision-support, where humans review outputs, agentic AI will require the JAG Corps to engineer safeguards *into* the AI models and the workflow. The agentic AI suite must include real-time performance monitoring to assess accuracy and compliance, ensuring *auditability, traceability, and explainability*.[31] This oversight regime must also include independent verification of model outputs, enterprise fail-safe procedures, and, when required, human-on-the-loop intervention.[32]

The JAG Corps must ensure its AI engineers preserve the ability to isolate and suspend malfunctioning AI systems exhibiting unacceptable *bias, hallucination,* or *catastrophic forgetting*.[33] Functioning both ex ante (during system design and deployment) and ex post (through continuous monitoring), this oversight framework will anchor the JAG Corps's commitment to transparency, professional responsibility, and legally sound AI integration. After mitigating risk through engineered oversight, the AAAB will approve proposed agentic-AI systems based on the enhancements to workflow—accuracy, speed, and cost savings—balanced against the residual risk presented by the nature of the legal work and the level of autonomy.

Finally, the introduction of autonomous agents into legal processes will change the personal and special staff relationship between the JA and the commander.[34] Therefore, the JAG Corps should closely coordinate with Army senior leaders throughout the proposal, development, testing, and approval phases. Ultimately, agentic AI cannot be adopted simply because it is technologically possible; it should be incorporated only where there is a defensible mission benefit, a validated risk-mitigation strategy, and preserved accountability for legal outcomes.

JAG Corps 2035
The Advent of AGI: An AI-Managed Legal Practice

Vignette

By 2035—ten years into the AI revolution—the practice of law has radically transformed. Autonomous agents powered by AGI now execute complex reasoning across unlimited knowledge domains with minimal human intervention.[35] Once limited to narrow analytical tasks, AGI systems integrate perception, advanced reasoning, contextual judgment, and continuous self-learning.[36] Agentic-AI systems acted autonomously, but only within select legal workflows. Its activities were task-bound, and its knowledge was domain-specific. AGI, however, represents a paradigm shift; with multi-domain knowledge and general-purpose reasoning, AGI understands the enterprise, not just the task. Within the legal context, AGI systems apply legal judgment. They *independently* construct novel interpretations of law, develop creative arguments, and resolve legally ambiguous situations. These AGI systems can serve as advocates, expert senior counsel, adjudicators, and general counsel—fundamentally restructuring the American legal practice.

With the arrival of AGI, the JAG Corps has fielded "Tudor," its autonomous SJA. Trained on statutory law and regulations, decades of legal precedent, forty years of JAG Corps work product, and the oral histories of prominent JAG Corps leaders, Tudor possesses a deep institutional understanding of the JAG Corps's mission and its role. Tudor delivers accurate, near-instant legal support across all legal functions in any format: verbal guidance, email advisories, and fully reasoned written opinions. Operating under delegated authority and within JAG-Corps-defined parameters, Tudor issues final legal opinions in routine and complex matters alike. After a decade of working with narrow AI systems, senior commanders regard Tudor's legal support as operationally indispensable.

Parallel AI-enabled developments are also changing the art and science of command. The Army recently deployed an AGI-enabled "Deputy Commanding Officer" (DCO-AGI) system. Trained on professional military education curricula, the complete doctrinal library, extensive simulation archives, and the detailed study of its human commander's decision patterns, the DCO-AGI plans, assesses, and adapts, exercising judgment nearly indistinguishable from that of its human counterpart. While commanders retain the authority to limit the agent's span of control, they rarely do so—the system's speed, accuracy, and reliability have made it

integral to modern command decision-making.

AGI integration is also reshaping administrative proceedings and civil litigation. The G-1 AGI system now conducts routine enlisted separations and officer elimination boards, with human review limited to appeals. AGI also resolves civil litigation below designated dollar thresholds; AGI agents assemble the record, apply relevant law, and conduct thousands of adversarial simulations to arrive at an agreed result. These AGI tribunals produce results that are rarely overturned during human appellate review. Their accuracy, consistency, and speed have earned broad institutional and public support.

Autonomous AGI legal agents have fundamentally changed the legal profession. Entire legal institutions, business models, and decision-making hierarchies evolved or were destroyed.[37] Across the broader legal ecosystem, AGI has replaced 40 percent of legal professionals. Surviving law firms now operate as global AI-legal platforms, licensing proprietary AGI systems rather than selling attorney labor. Billable hours have disappeared. Firms generate revenue through subscription-based AGI legal services and by selling curated legal datasets and model architectures to corporate legal departments. Small human leadership teams supervise fleets of AGI legal agents producing integrated legal strategies and products based on deep analysis, complex risk assessments, and outcome prediction.

AGI has also fundamentally changed the practice of law throughout the military. These systems function as the command's legal mind—performing strategic, cross-domain, institutional legal reasoning. In contrast, human JAs function as the command's legal conscience—providing normative recommendations and overriding AGI outputs when necessary to preserve institutional accountability and the command's constitutional responsibility. The JAG Corps's legal practice now focuses on command judgment in ethically challenging contexts: the fusion of law, operational risk, and command responsibility in areas where policy guidance, law, and core values conflict.

Implications and Considerations

As our hypothetical transitions from narrow AI to the potential arrival of AGI, the implications for the legal profession become potentially existential. AGI will force legal scholars to consider foundational questions: *What does it mean to "practice law"? What is the social good of the human practice of law? What should be the role of AGI? What must be the role of human attorneys?* The JAG Corps should anticipate this moment and position itself now to lead the legal profession through this season of radical transformation.

JAG Corps thought leaders, including some of our youngest JAs, should develop well-researched positions grounded in the precepts that underpin the professions of law and arms. The JAG Corps should then extend its sphere of influence, leading a series of engagements with legal leaders from industry, academia, and government: *What should be the role of AGI in the law?* As a framework for addressing this question, the JAG Corps should organize its position around the four elements of a profession: special expertise, service to society, corporateness, and professional ethic.[38]

First, expertise.[39] AGI's capacity to outperform human lawyers will require a shift in how the legal profession defines "legal expertise." When AGI produces consistently superior legal research, analysis, and advice, expertise can no longer rest solely on individual cognition. Competent practice will increasingly turn on a lawyer's ability to effectively and ethically deploy and supervise AGI rather than personally perform each analytical task.[40]

Second, the legal profession should reclaim its commitment to *serving* society.[41] There remains a distinct moral and relational dimension to the practice of law—grounded in trust and accountability—that AGI systems cannot replicate.[42] Yet economic reality will test how much society is willing to pay for human judgment when AGI can deliver comparable work at a fraction of the cost. The profession should prepare for a bifurcated market: human-led services where relational judgment is indispensable, and machine-led services where speed, scale, and efficiency dominate.

Third, shared identity.[43] AGI will force the legal profession to redefine membership and accountability. As AGI systems provide legal advice and engage in advocacy, the profession should determine whether, and on what terms, such systems are included within its institutional identity. Bar associations will need new mechanisms for certifying, licensing, and overseeing AGI systems. Because AGI legal outputs derive from algorithms, training data, and system design, professional responsibility violations will extend to engineers, vendors, and law firm leadership. In the absence of clear lines of responsibility, the profession risks eroding public trust and its own identity.

Finally, the professional ethos.[44] AGI cannot possess a professional ethic; it does not have moral principles or values that guide behavior. The introduction of autonomous AGI systems will heighten, not reduce, the moral obligations of human lawyers. However, reliance on AGI risks diffusing personal accountability unless ethical duties evolve to cover AI oversight. The profession should ensure that lawyers remain accountable for outcomes shaped by the systems they operate, supervise, or rely on. Given the velocity of AI advancement, the JAG Corps must immediately prepare itself and the legal profession for this not-so-distant future. The legal profession should clearly articulate what the practice of law is, what AGI may do, and what humans must do.[45]

Forging Our Competitive Advantage: The Bimodal JA

Vignette

It was a sweltering August night at the Joint Readiness Training Center (JRTC), the first day of force-on-force. I stood on the drop zone waiting for a brigade combat team (BCT) to execute an airborne assault. From the south, C-130s roared in with their heavy drops. Through my night vision goggles, I watched wave after wave of paratroopers descend into contested terrain—a perfectly choreographed insertion, at least at first. As the operation unfolded, small clusters of Soldiers moved toward infrared strobes, trying to find their units. Minutes passed. Then hours. Formations never cohered. Soldiers grouped with the wrong elements; platoons and companies failed to assemble; the brigade structure dissolved into scattered pockets of combat power. Under normal training conditions, the commander of operations

group (COG) would have intervened—tasking observer/controller trainers (OC/Ts) to log deficiencies, reset the brigade, and keep a $25 million exercise on schedule. But this rotation was different. U.S. Forces Command and JRTC leadership had mandated a pure large-scale combat operations (LSCO) environment. No resets. No lifelines. The brigade was on its own.

For the next eighteen hours, the unit struggled to assemble. The BCT headquarters eventually produced four tactical operations centers, when there should have been two. Each of these incomplete and ineffective command-and-control nodes was located within the same kilometer grid square, sometimes separated only by a wood line. Yet each was unaware of the other's existence. When the opposing force finally struck, the engagement resembled 1916 rather than modern combined-arms maneuver: formations communicated by runners, movements were exposed, and combat power was dispersed. Questions that were usually answered instantly became paralyzing: *Where am I in relation to friendly and enemy forces? How can I shape the fight? What do my battalions need?*

The lesson was unmistakable. A formation that excelled with modern digital systems became disoriented without them. To fight and win in the fog, friction, and chance of LSCO, the Army must be able to operate in *digital and austere operating environments*.[46] That same truth now challenges the JAG Corps. As the Corps enters the AI age and integrates new capabilities into legal operations, commanders will still need JAs who have mastery of the law and can think, advise, and act when high-tech systems go dark. Put another way, in LSCO, the commander will need *you* on the team, not Tudor.

Strategic Framework

The JAG Corps must field bimodal JAs who are equally capable with and without AI systems, and The Judge Advocate General's Legal Center and School (TJAGLCS) is the center of gravity for this effort. The Corps faces two intertwined strategic challenges. First, JAs must become experts at leveraging AI systems. Second, JAs must also be able to "provide timely expert legal advice . . . across the competition continuum,"[47] including when digital systems are denied or degraded.

(Background source: Freepik)

Embedded within this second challenge is an emerging risk: the AI dependency trap.

To successfully provide legal support in today's operating environment, the JAG Corps will exploit AI capabilities through *human-machine integration* (HMI): designing AI and human JAs to function as a single cognitive system, with the human firmly in command.[48] AI should be treated as a cognitive teammate, performing tasks it excels at: collecting, analyzing, synthesizing, and drafting with speed and consistency. The JA will retain independent judgment, moral reasoning, creativity, empathy, and context-specific wisdom rooted in the Corps's four constants.[49] Proper integration, therefore, requires parallel investments: building AI capability *and* strengthening independent human competence.

However, as the JAG Corps builds proficiency with AI capabilities, it risks falling into the *AI dependency trap*: the gradual erosion of human expertise, judgment, and adaptability that follows from persistent reliance on machine cognition.[50] As the JAG Corps integrates AI capabilities, field-grade JAs will experience some *cognitive offloading*.[51] New JAs, though proficient with AI systems, may never achieve mastery of the law or develop the judgment needed for ambiguous legal challenges.[52] This risk will be particularly acute in austere operating environments, where AI tools are degraded or unavailable. The Corps and the broader legal profession now confront a paradox: unprecedented technical capability paired with eroding human expertise.

Implications and Considerations

TJAGLCS is the decisive institution for producing bimodal JAs. This mandate spans two interdependent lines of effort: (1) teaching the Corps to exploit AI responsibly and (2) developing JAs to operate without it. AI, when creatively used, offers TJAGLCS the profound opportunity to reinvent legal education and achieve both of these interdependent objectives.

Achieving HMI will require substantial investment in AI education and training. TJAGLCS is already developing a robust program of instruction to strengthen digital literacy and AI acumen, and it is positioned to be able to build foundational AI fluency across all cohorts, followed by tiered training that develops intermediate skills, supervisors, and strategic leaders.[53] Beyond classroom instruction, TJAGLCS can provide hands-on, tool-specific training and assessments. JAG Corps personnel should demonstrate proficiency on AI platforms through skills tests that evaluate both employment and troubleshooting of AI-enabled research, analysis,

and drafting. While the focus of this article is the use of AI in support of legal operations, there is an important corollary—JAG Corps personnel should also be trained and educated to competently advise clients on *their* development and use of AI capabilities.[54]

Successful HMI also requires preserving independent human mastery of the law. As such, TJAGLCS must continue to design curricula grounded in Bloom's Taxonomy and tailored to the learner to ensure that foundational courses assess knowledge and reasoning without AI assistance.[55] Professors should incorporate "no-tech" assessments, such as blue-book examinations, oral presentations, and exercises. This commitment will ensure that AI training supplements, rather than supplants, the education required for principled counsel and mastery of the law.[56]

Finally, AI offers TJAGLCS opportunities to advance its pedagogy, expand its educational window, and accelerate individual learning. Before arriving at the basic course, TJAGLCS can provide new JAs with an AI-enabled preparatory program that establishes a baseline of knowledge through instruction tailored to their learning style and educational needs.[57] During resident courses, professors can use AI tutors that provide diagnostic assessments, real-time feedback, and personalized coaching. Beyond in-person offerings, TJAGLCS can use virtual reality and *digital twins*—high-fidelity virtual replicas of real environments—to provide immersive education and training at home stations.[58] Finally, the JAG Corps can empower JAs by providing agentic-AI coaches to all new JAs—a desktop AI system that observes legal practice, identifies existing research and work product, anticipates errors, and coaches the JA throughout the workflow.[59]

The bimodal JA is the JAG Corps's competitive advantage. To achieve this end-state, the JAG Corps must pursue HMI through TJAGLCS education. The program of instruction should enable JAs to operate seamlessly with AI, while also developing mastery of the law to operate without AI. With the right balance of AI and analog education and training, the JAG Corps can field JAs who can provide effective legal support in any operating environment.

Closing Reflections

The JAG Corps's integration of AI will unfold in three waves of innovation: incremental modernization (2029: AI Legal Assistants), profound advancement (2032: Agentic-AI Legal Advisors), and radical transformation (2035: The Advent of AGI). Each horizon presents unique challenges, requiring different focus areas: first, identifying capability gaps and strengthening EA, then fielding AI systems and integrating agentic-AI workflows, and finally preparing for AGI.

Significantly, the JAG Corps will be forced to navigate tremendous creative destruction as the practice of law transitions from AI-enabled to AI-operated to, potentially, AI-managed. While this analysis hypothesizes about potential developments over the next decade, the underlying technologies already exist—narrow AI, foundation models, agentic systems, and digital twins are widely leveraged across industry and government. AGI is the only missing element, and the titans of the AI industry are aggressively orchestrating its arrival.[60]

Taken together, these implications reveal a central insight: the JAG Corps must reimagine its structures, processes, and professional identity to thrive in an era defined by AI. In the near term, the Corps should reform its EA and build the leadership, governance, and data foundations necessary to scale AI responsibly. As the JAG Corps adopts AI for decision-support, it should adopt a coherent AI employment framework and modernize its force structure. The integration of agentic-AI for decision-making will demand even deeper reforms, requiring the JAG Corps to identify processes appropriate for autonomous workflows with embedded safeguards.

The transition here is significant; JAs will shift from reviewing AI-developed work product toward monitoring the performance of the AI system itself. Following the advent of AGI, the JAG Corps will be forced to confront foundational questions about the meaning of "practicing law." Using the foundational pillars of a profession—expertise, service, corporateness, and ethos—the JAG Corps should facilitate a discourse with the American legal community to establish the role and parameters of AGI in law.

Given the demands of LSCO, the JAG Corps must develop bimodal JAs, equally proficient with and without AI systems, to navigate operational realities. This requires exquisite HMI, with AI as a cognitive teammate and humans retaining oversight. Central to this effort is TJAGLCS, which must simultaneously teach JAs to exploit AI while ensuring they master the law. Achieving this dual mandate demands substantial investment in education and hands-on training. By balancing AI-enabled instruction with traditional pedagogy, the JAG Corps can sustain its competitive advantage and produce JAs capable of providing principled counsel in any operating environment. The JAG Corps must immediately prepare for a near-term AI-*enabled* practice and a medium-term AI-*managed* practice by addressing the challenges and opportunities before us.

It's 2040, and the American JA is the most rigorously trained and technologically capable legal officer ever to serve in uniform. Today's JA enters the force fluent in both law and machine intelligence, trained from the outset to operate in an environment defined by AI decision-support, autonomous agentic AI systems, and early AGI. Their responsibilities demand mastery of the law; fluency in data science and machine learning; skill in auditing AI performance; operational understanding of cyber and information domains; and deep training in the ethics and legality of human-machine decision chains. They learn to validate autonomous actions, detect degraded systems, and provide effective legal advice without the aid of AI. This is the bimodal JA: equally capable of independent human judgment and working seamlessly with autonomous agents. They advise commanders at machine speed while safeguarding constitutional principles in a battlespace where humans and machines act side by side. But the velocity of change continues . . . IBM just released its first *quantum* AI system. **TAL**

COL Howard is the Chief of the Contract Litigation and Intellectual Property Division, U.S. Army Legal Services Agency, at Fort Belvoir, Virginia. He leads the JAG Corps's Information Technology Operational Planning Team.

Notes

1. Stewart W. Husted, *Achieving Victory Through Strategic Management and Leadership*, in George C. Marshall: Servant of the American Nation 146 (Charles F. Brower ed., 2011) (describing that, upon becoming the Chief of Staff of the Army in 1939, General Marshall reflected on his need to develop new skills); *see also* Thomas Ricks, *Gen. Marshall's Comment on How He Was Re-Educated During World War II*, Foreign Pol'y (Oct. 21, 2015), https://foreignpolicy.com/2015/10/21/gen-marshalls-comment-on-how-he-was-re-educated-during-world-war-ii [https://perma.cc/9MGF-D77G] (describing how, during the Tehran Conference of 1943, General Marshall reflected on his need for education as the Allies planned the cross-channel landings).

2. Marty Trevino, *Cyber Physical Systems: The Coming Singularity*, Prism, no. 3, 2019, at 3.

3. Nat'l Sec. Comm'n on A.I., Final Report 7 (Mar. 2021) [hereinafter Final Report].

4. Nancy Albinson, Deloitte, Robotics & Physical AI: Intelligence in Motion (2025), https://www.deloitte.com/content/dam/assets-zone3/us/en/docs/about/2025/robotics-and-physical-ai-tech-futures-report.pdf [https://perma.cc/7RZ2-C8PA]. *See, e.g.*, *Digit by the Numbers*, Agility Robotics, https://www.agilityrobotics.com/solution [https://perma.cc/PT92-E92W] (last visited Dec. 11, 2025).

5. *Aurora Begins Commercial Driverless Trucking in Texas, Ushering in a New Era of Freight,* Bus. Wire (May 1, 2025), https://www.businesswire.com/news/home/20250501031863/en/Aurora-Begins-Commercial-Driverless-Trucking-in-Texas-Ushering-in-a-New-Era-of-Freight [https://perma.cc/X634-XHAS]. *See, e.g.*, *Aurora Driver Capability Videos*, Aurora, https://aurora.tech/capabilities [https://perma.cc/QCS5-G2SP] (last visited Dec. 11, 2025).

6. Zita Ballinger Fletcher, *Guardsman Learns to Fly Autonomous Black Hawk in Less than an Hour*, Army Times (Nov. 3, 2025), https://www.armytimes.com/air-warfare/2025/11/03/guardsman-learns-to-fly-autonomous-black-hawk-in-less-than-an-hour [https://perma.cc/ F4AD-9J7H]. *See also* Courtney Albon, *Palantir Delivers First 2 Next-Gen Targeting Systems to Army*, Def. News (Mar. 7, 2025), https://www.defensenews.com/land/2025/03/07/palantir-delivers-first-2-next-gen-targeting-systems-to-army [https://perma.cc/55VL-GSAN]; Zita Ballinger Fletcher, *Army Aims to Field 1 Million Drones in Next 2-3 Years*, Def. News (Nov. 7, 2025), https://www.defensenews.com/breaking-news/2025/11/07/army-aims-to-produce-1-million-drones-in-next-2-3-years [https://perma.cc/MZH5-UCA3].

7. Zach Warren, *Agentic AI in Legal: What It Is and Why It May Appear in Law Firms Soon*, Thompson Reuters (Dec. 9, 2024), https://www.thomsonreuters.com/en-us/posts/technology/agentic-ai-legal [https://perma.cc/PXR2-AEN5].

8. Jared Perlo & Angela Yang, *These People Ditched Lawyers for ChatGPT in Court*, NBC News (Oct. 8, 2025), https://www.nbcnews.com/tech/innovation/ai-chatgpt-court-law-legal-lawyer-self-represent-pro-se-attorney-rcna230401 [https://perma.cc/PA97-DEKF].

9. Enterprise architecture is the industry standard framework used to depict, manage, and align an organization's IT assets, people, operations, and projects with its overall strategic goals. Broadly, it consists of four layers: technology (hardware), applications (software), data (information), and governance (business). Nick Barney & Alexander Gillis, *What Is Enterprise Architecture?*, TechTarget (Sep. 12, 2025), https://www.techtarget.com/searchcio/definition/enterprise-architecture [https://perma.cc/V5CN-97R2].

10. *See* CIO Council, The Application Rationalization Playbook: An Agency Guide to Portfolio Management (n.d.), https://www.cio.gov/assets/files/Application-Rationalization-Playbook.pdf [https://perma.cc/U3RS-X9N9].

11. *See* Joe Caserta et al., McKinsey & Co., The Data Dividend: Fueling Generative AI (Sep. 15, 2023). AI systems will require the JAG Corps to identify, ingest, curate, process, and organize its data.

12. *See* Reed Kennedy, Strategic Management ch. 7.4 (2020), https://pressbooks.lib.vt.edu/strategic-management/chapter/7-4-types-of-innovation [https://perma.cc/93MK-GPMP] (defining radical innovation); Final Report, *supra* note 3, at 7.

13. Obrain Tinashe Murire, *Artificial Intelligence and Its Role in Shaping Organizational Work Practices and Culture*, 14 Admin. Scis. 316 (2024), https://www.mdpi.com/2076-3387/14/12/316 [https://doi.org/10.3390/admsci14120316].

14. Clayton M. Christensen, The Innovator's Dilemma: When New Technologies Cause Great Firms to Fail 108 (2000).

15. *See* Joseph Schumpeter, Capitalism, Socialism, and Democracy 83 (2008). Joseph Schumpeter, one of the most influential economists of the twentieth century, coined the term "creative destruction" to explain that "capitalism . . . incessantly revolutionizes the economic structure from within, *incessantly destroying the old one, incessantly creating a new one.*" *Id. See also* Eric Schmidt, *Why Technology Will Define the Future of Geopolitics*, Foreign Affs. (Feb. 28, 2023), https://www.foreignaffairs.com/united-states/eric-schmidt-innovation-power-technology-geopolitics [https://perma.cc/L795-9VYP] ("Innovation power is the ability to invent, adopt, and adapt to new technologies.").

16. *See AI Glossary/Dictionary*, MIT Media Lab, https://www.media.mit.edu/tools/ai-glossary-dictionary [https://perma.cc/38T5-KLPL] (last visited Dec. 12, 2025). The main branches of AI include machine learning (ML), natural language processing (NLP), robotics, computer vision, expert systems, and neural networks (deep learning). *Id.* While NLP and expert systems offer the most immediate use case for the legal practice, attorneys can anticipate the use of ML (predictive analytics), computer vision (interpret images and PDFs), and potentially robotics.

17. *See* U.S. Dep't of Army, Field Manual 6-0, Commander and Staff Organization and Operations para. 2-32 (16 May 2022) [hereinafter FM 6-0].

18. Multimodal sensing enables AI inference by integrating different data inputs, like images, radar, and infrared signals.

19. *See* A.B.A. Comm. on Ethics & Pro. Resp., Formal Op. 512 (2024); *see also* Model Rules of Pro. Conduct r. 1.1 ("Competence"), r. 1.3 ("Diligence"), r. 1.4 ("Communication"), r. 1.6 ("Confidentiality"), r. 3.3 ("Candor to the Tribunal), r. 5.1 ("Supervisory Responsibilities"), r. 5.3 ("Nonlawyer Assistance"), r. 7.1 ("Communications Concerning a Lawyer's Services") (A.B.A. 2025); U.S. Dep't of Army, Regul. 27-26, Rules of Professional Conduct for Lawyers (26 Mar. 2025); *see, e.g.*, Va. Bar Ass'n, VBA Model Artificial Intelligence Policy for Law Firms (May 2024), https://www.vba.org/docDownload/2672069 [https://perma.cc/GPD3-CBE2].

20. Shane Shaneman, The AI Stack: A Blueprint for Developing and Deploying AI, at slide 27 (Feb. 1, 2024) (unpublished presentation) (on file with author). The computing and device layers are the servers, central processing units (CPUs), graphics processing units (GPUs), and optimized combinations of chips. The data management layer includes data ingestion, cleaning, labeling, and storage. The machine learning layer is where the AI model learns from the data to recognize patterns, predict outcomes, and generate insights. The modeling and decision-support layers incorporate strategic reasoning paradigms like game theory, opponent modeling, and exploitation. The planning and autonomy layers at the top of the stack reflect the pinnacle of AI's potential—empowering a machine to act on a human's behalf or enhance human capability.

21. Alice Gomstyn & Alexandra Jonker, *What Is Data Curation?*, IBM, https://www.ibm.com/think/topics/data-curation [https://perma.cc/5YFF-9RQR] (last visited Dec. 12, 2025).

22. Accuracy: How accurate is the AI model, and how critical is accuracy for this task? Efficiency: If implemented, what is the increase in speed and cost avoidance? Does this translate to improved lawyer effectiveness in other areas? Complexity: Given Judge Advocate Legal Services AI proficiency, how difficult will it be to implement the solution throughout the JAG Corps? Ethical risk: Does the activity raise confidentiality, privilege, bias, or compliance concerns? *See* Nat'l Inst. of Standards & Tech., AI Risk Management Framework (Jan. 2024), https://www.nist.gov/itl/ai-risk-management-framework [https://perma.cc/N8B6-L3ZG]. `

23. Education and training are critical for developing JAs within each time horizon. Given its importance, the role of education is addressed in detail within this article's recommendation for developing bimodal JAs through human-machine integration. *See supra* Section titled "Forging Our Competitive Advantage: The Bimodal JA."

24. *AI Glossary/Dictionary*, *supra* note 16 ("Agentic AI refers to AI systems designed to act autonomously, perceiving their environment, making decisions, and taking actions to achieve specific goals. These systems often incorporate features like adaptability, goal orientation, and interaction with dynamic environments.").

25. A foundation model is an AI model "trained on vast, immense datasets and can fulfill a broad range of general tasks. They serve as the base or building blocks for crafting more specialized applications." Rina Diane Caballar & Cole Stryker, *What Are Foundation Models?*, IBM, https://www.ibm.com/think/topics/foundation-models [https://perma.cc/HE37-YV5V] (last visited Dec. 12, 2025). *See also* Matthew Kosinski, *What Is a Data Lake?*, IBM, https://www.ibm.com/think/topics/data-lake [https://perma.cc/NK35-J8YF] (last visited Dec. 12, 2025) ("A data lake is a low-cost data storage environment designed to handle massive amounts of raw data in any format, including structured, semi-structured and unstructured data."). *See AI Glossary/Dictionary*, *supra* note 16. There are three types of AI learning: supervised, unsupervised, and reinforcement learning. Supervised learning relies on labeled data with a benchmark ground truth to predict or classify values. Unsupervised learning is data-driven and can identify patterns and clusters from unlabeled data. Reinforcement learning is reward-based, meaning

a model can "learn" from its mistakes through human feedback or trial and error.

26. Catherine Reach, *The Emergence of Agentic AI*, N.C. Bar Ass'n. (July 14, 2025), https://www.ncbar.org/2025/07/14/the-emergence-of-agentic-ai [https://perma.cc/KXS4-5U4D].

27. *See* Deloitte, The Agentification of the Enterprise: Navigating Enterprise Transformation with Agentic AI (Oct. 2025) [hereinafter The Agentification of the Enterprise], https://www.deloitte.com/content/dam/assets-zone3/us/en/docs/services/consulting/2025/agentic-ai-enterprise-adoption-guide.pdf [https://perma.cc/8HLD-5RXS].

28. *See* Lareina Yee, Michael Chui, & Roger Roberts, *One Year of Agentic AI: Six Lessons from the People Doing the Work*, McKinsey & Co. (Sep. 12, 2025), https://www.mckinsey.com/capabilities/quantumblack/our-insights/one-year-of-agentic-ai-six-lessons-from-the-people-doing-the-work# [https://perma.cc/28XQ-KF55]; Linda Mantia, Surojit Chatterhjee & Vivian S. Lee, *Designing a Successful Agentic AI System*, Harv. Bus. Rev. (Oct. 24, 2025), https://hbr.org/2025/10/designing-a-successful-agentic-ai-system# [https://perma.cc/VL5K-85B4].

29. *See* Joint Chiefs of Staff, Joint Pub. 5-0, Joint Planning, at III-15 (July 1, 2025). An operational approach broadly describes the actions a command must take to transform the current conditions into those desired at the end state. Planners should examine the current operating environment, define the overarching goal, identify the problem, and identify the activities to change the current state to the future state. *See id.* at III-16, fig. III-7.

30. *See* The Agentification of the Enterprise, *supra* note 27.

31. *See AI Glossary/Dictionary*, *supra* note 16. Auditable AI refers to systems designed with mechanisms that allow their processes, decisions, and outcomes to be reviewed, verified, and traced by humans or external systems. This includes maintaining logs, providing detailed documentation, and enabling post-hoc analysis. *What Is Explainable AI?*, IBM, https://www.ibm.com/think/topics/explainable-ai [https://perma.cc/5KX7-ZAKK] (last visited Dec. 12, 2025) ("Explainable artificial intelligence is a set of processes and methods that allows human users to comprehend and trust the results and output created by machine learning algorithms.").

32. *See* The Agentification of the Enterprise, *supra* note 27.

33. AI bias occurs when systems produce "biased results due to human biases that skew the original training data or AI algorithm leading to distorted outputs and potentially harmful outcomes." James Holdsworth, *What Is AI Bias?*, IBM, https://www.ibm.com/think/topics/ai-bias [https://perma.cc/6P3R-ZTF7] (last visited Dec. 12, 2025). AI hallucinates when it "perceives patterns or objects that are nonexistent or imperceptible to human observers, creating outputs that are nonsensical or altogether inaccurate." *What Are AI hallucinations?*, IBM, https://www.ibm.com/think/topics/ai-hallucinations [https://perma.cc/H686-6TPB] (last visited Dec. 12, 2025). "Catastrophic forgetting occurs when neural networks forget previously learned tasks after being trained on new data or undergoing fine-tuning for specific tasks." Ivan Belcic & Cole Stryker, *What Is Catastrophic Forgetting?*, IBM, https://www.ibm.com/think/topics/catastrophic-forgetting [https://perma.cc/7Y3C-TTYX] (last visited Dec. 12, 2025).

34. FM 6-0, *supra* note 17, paras. 2-81, 2-129, 2-143. The staff judge advocate (SJA) is considered "a member of the commander's personal and special staff." *Id.* para. 2-143. As a member of the special staff, SJAs perform "professional [and] technical responsibilities" to "help commanders and other staff members perform their functional responsibilities." *Id.* para. 2-81. As a member of the personal staff, SJAs "have a unique relationship" and "communicate directly" with the commander. *Id.* para. 2-129. Specifically, they are "responsible for providing all types of legal support and advice" to the command. *Id.* para. 2-143.

35. Dave Bergmann & Cole Stryker, *What Is Artificial General Intelligence (AGI)?*, IBM, https://www.ibm.com/think/topics/artificial-general-intelligence [https://perma.cc/J2MJ-NN96] (last visited Dec. 12, 2025); *AI Glossary/Dictionary*, *supra* note 16. AI is divided into three main types: narrow AI, AGI, and artificial super intelligence (ASI). Narrow AI is an intelligent system focused on one specific task (e.g., language or autonomous driving). AGI refers to "human-like versatility, capable of performing a wide range of tasks across various domains with adaptability and reasoning." *AI Glossary/Dictionary*, *supra* note 16. ASI refers to a theoretical point-in-time when AI surpasses the human mind in all facets.

36. *What Is Artificial General Intelligence (AGI)?*, McKinsey & Co. (Mar. 21, 2024), https://www.mckinsey.com/featured-insights/mckinsey-explainers/what-is-artificial-general-intelligence-agi# [https://perma.cc/X8Y9-TZ4T]. The eight capabilities needed for narrow AI to become AGI are visual perception, audio perception, fine motor skills, natural language processing, problem-solving, navigation, creativity, and social/emotional engagement. *Id.*

37. *See* Marjorie Richter, *How AI Is Transforming the Legal Profession*, Thomson Reuters (Aug. 18, 2025), https://legal.thomsonreuters.com/blog/how-ai-is-transforming-the-legal-profession [https://perma.cc/KAX4-H6M7].

38. *See* Richard Swain & Albert Pierce, The Armed Forces Officer 19 (2017).

39. *Id.* ("A profession has a body of expertise, built over time on a base of practical experience, which yields fundamental principles and abstract knowledge; which normally must be mastered through specialized education; which is intensive, extensive, and continuing; and which can then be applied to the solution of specific, practical problems.").

40. *See, e.g.*, Model Rules of Pro. Conduct r. 1.1(a) (N.Y. Unified Ct. Sys. 2024) ("A lawyer should provide competent representation to a client.").

41. *See* Swain & Pierce, *supra* note 38, at 22. ("A profession has a responsibility to provide a useful, even critical, service to the larger society. In exchange for the service that a profession provides, the society grants to members of that profession certain privileges, prerogatives, and powers that it does not extend to the rest of its citizens.").

42. *See* Merel Noorman, *Computing and Moral Responsibility*, Stanford Encyclopedia of Phil. (Feb. 2, 2023), https://plato.stanford.edu/archives/spr2023/entries/computing-responsibility [https://perma.cc/C7UE-PZ3J]. Intelligent machines are not moral agents and cannot be held morally responsible because AGI will never *serve* society.

43. Swain & Pierce, *supra* note 38, at 24 (stating that corporateness "reflects a sense of common endeavor . . . [with] two important dimensions: a shared identity, and the wish to exert control over membership in the profession").

44. *Id.* at 25 ("Professional ethics are the moral standards to which the profession is committed and held" and a "[p]rofessional ethos is the collective and internal sense of what each member must be as a member of the profession.").

45. The author notes that many of the considerations illuminated by this "profession" framework apply equally to earlier planning horizons (i.e., AI-enabled legal activity and the integration of agentic-AI).

46. *See* Carl Von Clausewitz, On War 89, 649 (Michael Howard & Peter Paret eds. & trans., Princeton Univ. Press, 1976) (1832) (providing the Clausewitzian concepts of "fog," the uncertainty and confusion inherent in warfare; "friction," the countless small, unpredictable difficulties that hinder military operations; and "chance," the unpredictable element of luck and fortune, all of which are ever present in LSCO and will impact the availability and utility of digital capabilities, including AI).

47. Joint Chiefs of Staff, Joint Pub. 3-0, Joint Campaigns and Operations, at V-1 (June 18, 2022).

48. *See* Marty Trevino, *Cyber Physical Systems: The Coming Singularity*, Prism no. 3, 2019, at 2, 3; Jonathan P. Wong et al., RAND. Corp., One Team, One Fight: Insights on Human-Machine Integration For the U.S. Army (2025), https://www.rand.org/pubs/research_reports/RRA2764-1.html [https://perma.cc/H297-SWNL]. When applied to the legal context, attorneys and AI systems working together will exploit each other's strengths; the machines will process data and recognize patterns, while the humans will apply judgment, ethics, creativity, strategy, and persuasion.

49. The JAG Corps's four constants are mastery of the law, principled counsel, servant leadership, and stewardship. U.S. Dep't of Army, Field Manual 3-84, Legal Support to Operations 1-2 fig. 1-1 (Sep. 1, 2023) [hereinafter FM 3-84].

50. *See* Andrew R. Lee & Jason M. Loring, *From Enhancement to Dependency: What the Epidemic of AI Failures in Law Means for Professionals*, Nat'l L. Rev. (Aug. 19, 2025), https://natlawreview.com/article/enhancement-dependency-what-epidemic-ai-failures-law-means-professionals [https://perma.cc/7DS9-XB5S].

51. "Relying on AI . . . may interrupt cognitive processes that would otherwise build over time. When students used ChatGPT, their brains showed lower connectivity across key regions associated with active thinking and memory. When students worked without any tools, relying solely on their knowledge, their brains exhibited more cross-regional communication." Sascha Brodsky, *When AI Thinks for Us, the Brain Gets Quieter*, IBM, https://www.ibm.com/think/news/when-ai-thinks-brain-gets-quieter [https://perma.cc/FGH2-XRTS] (last visited Dec. 12, 2025). *See also* Betsy Sparrow et al., *Google Effects on Memory: Cognitive Consequences of Having Information at Our Fingertips*, 333 Sci. 776, 776–78 (2011) ("[P]eople are less likely to remember facts when they know that they can retrieve those facts later, via search engines. In other words, when we trust a tool to remember for us, we stop trying.").

52. Prompt engineering, the "iterative refinement of different prompts" enables Generative AI systems to "effectively learn from diverse input data and adapt to minimize biases, confusion and produce more accurate

responses." Vrunda Gadesha, *What Is Prompt Engineering?*, IBM, https://www.ibm.com/think/topics/prompt-engineering [https://perma.cc/9QBP-7REY] (last visited Dec. 12, 2025). The reliance on prompt engineering can lead to cognitive offloading—JAs may outsource core analytical and reasoning tasks to AI, eroding their own understanding of the law over time.

53. Upskilling the workforce is critical to enabling AI capabilities and yet, "companies often undervalue, underspend, and then underwhelm in their investments in human capabilities." Kimberly Borden et al., *The AI Revolution Will Be 'Virtualized'*, McKinsey & Co. (Apr. 8, 2025), https://www.mckinsey.com/capabilities/operations/our-insights/the-ai-revolution-will-be-virtualized# [https://perma.cc/73AK-ALAJ]. TJAGLCS is leaning into this challenge.

54. At the time of this writing, JAs serving at combatant commands and Service Component commands are heavily involved in advising clients on developing and employing AI capabilities in cyber and physical operations, such as neural networks and AI-enabled polymorphic malware.

55. The hierarchy of educational objectives builds through the following tasks: knowledge, comprehension, application, analysis, synthesis, and evaluation. *Bloom's Taxonomy*, Ctr. for Teaching Innovation: Cornell Univ., https://teaching.cornell.edu/resource/blooms-taxonomy [https://perma.cc/BV2D-NGVZ] (last visited Dec. 12, 2025).

56. FM 3-84, *supra* note 49, fig. 1-1.

57. *See* Diane Hamilton, *Virtual Reality in Corporate Training: A New Era of Employee Onboarding*, Forbes (Apr. 4, 2025), https://www.forbes.com/sites/dianehamilton/2025/04/04/virtual-reality-in-corporate-training-a-new-era-of-employee-onboarding [https://perma.cc/M3MP-XJFH]. Digital twins enable immersive learning as employees "move, visualize, and experience" their work environment.

58. A digital twin is a "virtual [replica] of a physical object or system that uses real-time data to accurately reflect its real-world counterpart's behavior, performance, and conditions." Nick Gallagher & Maggie Mae Armstrong, *What Is a Digital Twin?*, IBM, https://www.ibm.com/think/topics/digital-twin [https://perma.cc/HM5D-JY47] (last visited Dec. 12, 2025). Across industry, digital twins are accelerating learning by enabling employees to rehearse, experiment, and refine performance in conditions that mirror the real world. From Taiwan Semiconductor and BMW factories to Formula One drivers, digital twins have proven transformative at optimizing performance. *See* Borden et al., *supra* note 53; Alex Cosmas et al., *Digital Twins and Generative AI: A Powerful Pairing*, McKinsey & Co. (Apr. 11, 2024), https://www.mckinsey.com/capabilities/tech-and-ai/our-insights/tech-forward/digital-twins-and-generative-ai-a-powerful-pairing [https://perma.cc/J3XM-7MPU]; James McKenna, *NVIDIA Omniverse Digital Twins Help Taiwan Manufacturers Drive Golden Age of Industrial AI*, Nvidia (May 18, 2025), https://resources.nvidia.com/en-us-industrial-sector-resources-mc/en-us-industrial-sector-resources/omniverse-digital-twins-taiwan [https://perma.cc/H99H-BP9X]; SAP Insights research center, *Digital Twins at Work: 9 Examples*, SAP (Aug. 13, 2025), https://www.sap.com/blogs/digital-twins-at-work [https://perma.cc/32QJ-YB93]. Thor Olavsrud, *Digital Twins: 5 Success Stories*, CIO (Aug. 30, 2022), https://www.cio.com/article/189121/digital-twins-4-success-stories.html [https://perma.cc/5UFN-QTYK]. Similar tools could enable TJAGLCS to create environments for legal advising, advocacy, and warfighting.

59. Example coaching from the JAG Corps's desktop mentor bot: "*CPT Howard, it appears you are writing a legal opinion on Space-A noninterference travel. You are missing several key facts. Would you like me to generate email correspondence to secure that information? Here are three legal reviews on this topic that were drafted last week by OTJAG Adlaw. Would you like me to review your legal opinion at the end or coach you through this process?*"

60. OpenAI's mission statement explicitly contemplates developing AGI, by which they mean "highly autonomous systems that outperform humans at most economically valuable work." *OpenAI Charter*, OpenAI, https://openai.com/charter [https://perma.cc/6DWU-53ZC] (last visited Dec. 12, 2025); *see also Planning for AGI and Beyond*, OpenAI (Oct. 28, 2025), https://openai.com/index/planning-for-agi-and-beyond [https://perma.cc/YFZ8-SNRC] (describing OpenAI's current efforts to develop and transition to a world with AGI).