Strategic Inflection Point

The Most Historically Significant and Fundamental Change in the Character of War Is Happening Now—While the Future Is Clouded in Mist and Uncertainty

By General Mark A. Milley

Geostrategic competition and rapidly advancing technology are driving fundamental changes to the character of war. Our opportunity to ensure that we maintain an enduring competitive advantage is fleeting. We must modernize the Joint Force to deter our adversaries, defend the United States, ensure future military advantage, and, if necessary, prevail in conflict. The Joint Force has taken the first step by developing and publishing the Joint Warfighting Concept (JWC) and updating Joint Publication 1, Doctrine for the Armed Forces of the United States. *The JWC is a joint, combined vision for how the U.S. military will operate across all domains. The next step is to create a leadership structure that turns concepts into capabilities. The Joint Force must make fundamental changes now to win the next war and, by doing so, we will deter the war from happening in the first place.*

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U.S. Coast Guard–manned LCVP from USS *Samuel Chase* disembarks troops of Company A, 16th Infantry, 1st Infantry Division, wading onto Fox Green section of Omaha Beach, early on June 6, 1944 (U.S. Coast Guard/Robert F. Sargent); *Der Wanderer über dem Nebelmeer*, by Caspar David Friedrich, oil on canvas, ca. 1817 (Hamburger Kunsthalle); Drone swarm (Shutterstock/Chesky); Army Futures Command IVAS Concept Art, circa 2019 (U.S. Army)

When we look to the future, we can see broad outlines, but the details are clouded in fog and mist. Our path is rarely clear and never certain. Nevertheless, we must make choices for the future of the Joint Force. We know we will not get it right, but we must strive to get it less wrong than the enemy, paraphrasing the late historian Michael Howard.[1] The new Joint Warfighting Concept (JWC) is our guide to that future. It will drive our doctrine, organizational design, training, and ultimately warfighting itself.

This is not the first time we have adapted to address an uncertain future. Seventy-nine years ago, on June 6, 1944, ordinary Americans came from all walks of life to enter the crucible of combat. Over 154,000 troops from eight Allied nations boarded 6,000 vessels to cross the choppy English Channel. As the moon illuminated the night sky, 24,000 Allied paratroopers and glider infantry drifted down to the coast of France. The continuous roar from the 88mm guns pierced the serenity of the night. The stream of lead from the German MG-42s raked the beaches of Normandy. For many American Soldiers, the taste of saltwater and the sharp smell of gunpowder were their first experiences of combat. These brave troops answered our nation's call to defend freedom and democracy. The cost was tremendous. Twenty-six thousand Americans were killed in action from the storming of Normandy to the liberation of Paris. Between 1914 and 1945, 150 million people were slaughtered in the Great Power wars of World War I and World War II.

Since 1945, there have been several limited and regional wars, but there has not been another Great Power war. There are many reasons for this outcome. Two of the most important reasons are the rules-based international order enforced by a network of allies and partners and the dominant capability of the U.S. military. This order has held for almost eight consecutive decades. Unfortunately, we now see tears in the fabric of the rules-based international order as adversarial global powers continuously challenge the system. The time to act is now.

The U.S. military's purpose is simple and contained in our oath to support and defend the Constitution against all enemies, both foreign and domestic, and to protect the American people and our interests. Since World War II, the strength of our nation and military, alongside that of our allies and partners, has deterred Great Power war. Freedom is not guaranteed. As Ronald Reagan warned, "Freedom is a fragile thing and it's never more than one generation away from extinction. It is not ours by way of inheritance; it must be fought for and defended constantly by each generation."[2]

In 2023, the rules-based international order is under intense stress. Simultaneously, we are witnessing an unprecedented fundamental change in the character of war, and our window of opportunity to ensure that we maintain an enduring competitive advantage is closing. What we do in the next few years will set conditions for future victory or defeat. The U.S. military is the most effective fighting force the world has ever known, but maintaining this advantage is not a given. There are two critical areas where the Joint Force must adapt now:

- a conceptual roadmap—a unifying *joint* operational vision—that deliberately drives future force development and design
- a leadership structure to turn that vision into reality.

Changing Character of War

The rapid change in the character of war demands a corresponding fundamental shift in our Joint Force. As Carl von Clausewitz stated, the *nature* of war—a violent contest of wills to achieve political aims—is immutable. Humans will continue to impose their political will on opponents with violence. Clausewitz also tells us the nature of war involves fear, friction, uncertainty, and chance inherent in the dynamic interaction among the government, the people, and the military.

However, the *character* of war—how, where, with what weapons, and technologies wars are fought—is changing rapidly.[3] For example, the last fundamental change in the character of war occurred between World War I and World War II. Technological advancements fundamentally transformed the character of warfare: mechanization and the use of wheeled and tracked vehicles; widespread employment of the aircraft, including development of bombers and fighters; and proliferation of radio to coordinate and synchronize dispersed units. The way militaries conducted warfare—the *character*—shifted drastically

and drove a change in organizational structure, training, and leadership development. The nations that capitalized on these changes created the greatest advantages in battle.

Almost all developed nations had access to these technologies—Great Britain, France, Germany, the Soviet Union, Japan, and the United States—but it was only the German Wehrmacht that initially optimized all three technological advancements, combining them into a way of war called Blitzkrieg that allowed them to overrun Europe in just 18 months.[4] Germany eventually lost to the overwhelming industrial might of the United States, in conjunction with the Soviet Union and other Allies, but we may not get 18 months to react to a future enemy onslaught.

Today, we are witnessing another seismic change in the character of war, largely driven again by technology. The next conflict will be characterized by ubiquitous sensors with mass data collection and processing ability that minimize the opportunity for military forces to hide. Low-cost autonomous platforms, coupled with commercial imagery and behavior tracking data augmented by artificial intelligence (AI) and analysis tools, will accelerate the ability to sense and make sense of the environment. Inexpensive drones, loitering munitions, and precision-guided munitions with increasing speed, range, and accuracy will further reduce the time it takes to close the kill web. Robotics and additive manufacturing will change the way militaries supply and sustain their forces. Pervasive sensors, AI-driven weapon systems, and long-range precision fires will make the fastest platforms seem slow and leave the most hidden formations exposed.

Finally, the increasing development of space and cyber platforms and capabilities, both kinetic and nonkinetic, ensure the next war's decisive terrain will not be limited to the earth's surface. In short, the battlefield fundamentals of see, shoot, move, communicate, protect, and sustain are changing in fundamental ways. The attributes of organizations will—by necessity—be small, widely dispersed, nearly autonomous and self-sustaining, capable of constant motion, and able to periodically mass effects for decisive action. This operational environment will place a premium on decentralized mission command. Centralized micromanaged leadership from the top will be ineffective. The American homeland has almost always been a sanctuary during conflict, but this will not be the case in a future war. Robust space and cyber capabilities allow adversaries to target critical national infrastructure. We cannot be sure that adversaries will ethically constrain emerging technologies or restrain their use of weapons of mass destruction.[5]

The Joint Force is actively harnessing these technologies, but as the Russian invasion of Ukraine has shown, technology alone does not guarantee success in the next war. The Joint Force must adopt innovative technology; modernize or divest older systems; train, organize, and equip the warfighter in new ways; update our doctrine to be effective in the operating environment; develop resilient leaders who can successfully conduct operations with little guidance and execute the true meaning of mission command; and work as a truly joint and combined team. But we are not adapting fast enough to optimize the force and keep pace with the changing character of war. We must adapt much faster than we are doing now.

Changing Global Order

The global geopolitical situation has also changed fundamentally. During the Cold War, there were two competing superpowers. After the fall of the Berlin Wall, there was a brief so-called unipolar moment. Now, it is clear we are in a multipolar world with at least three Great Powers—the United States, China, and Russia—with other countries rapidly emerging as regional and potential global Great Powers. We can say with reasonable certainty the future will be increasingly complex. Additionally, the rules-based international order established 80 years ago is currently under tremendous strain. The United States now faces two nuclear armed powers. Therefore, we must do everything in our power to deter conflict. We may be in competition and confrontation, but we are not yet in conflict.

The 2022 National Security Strategy (NSS) identifies the People's Republic of China (PRC) as "America's most consequential geopolitical challenge" and its "pacing challenge."[6] More specifically, the National Defense Strategy (NDS) states that the PRC is a revisionist power that employs state-controlled forces, cyber and space operations, and economic coercion against the United States and its allies and partners.[7] In 2018, it was reported that China's President Xi Jinping stated to the 13th National People's Congress in Beijing, "We are resolved to fight the bloody battle against our enemies . . . with a strong determination to take our place in the world."[8] China seeks to fundamentally revise the system while still operating within it.

The world is also facing the greatest shift in economic power in well over 100 years. The PRC has leveraged economic growth to invest heavily in its military with the stated intention of exceeding the capability of the U.S. military in the Western Pacific in the next decade and globally by 2049.[9] Through economic coercion, the PRC is expanding its global footprint and increasing its ability to project military power at range and scale. In addition, it is aggressively modernizing its military to develop nuclear, space, cyber, land, sea, and air capabilities to erode the competitive advantages that the United States and its allies have enjoyed for decades. The PRC's goal is to revise the global international order by mid-century and become the regional Asian hegemon in the next 10 years. The PRC is taking increasingly aggressive action toward those ends with a publicly unambiguous national aspiration and roadmap. This represents a real and growing national security challenge for the United States and its allies. While the PRC is an increasingly capable strategic competitor, history is not deterministic, and war is neither inevitable nor imminent. It is important that we keep our relationship with the PRC at the level of competition and not allow it to escalate into conflict.

British "Experimental Company" participates in Project Convergence 22, Fort Irwin, California, November 4, 2022 (Courtesy British Army/ Donald C. Todd)

While the PRC is the Joint Force's pacing challenge, Russia poses an acute threat. The NSS warns that Russia "poses an immediate and ongoing threat to the regional security order in Europe."[10] Russia is a revanchist actor seeking to return to an era when it dominated the "Near Abroad" in a 19th- and 20th-century imperial system.[11] Furthermore, Russia employs disinformation, cyber, and space operations against the United States and irregular proxy forces in multiple countries.[12]

Russia's unprovoked and illegal invasion of Ukraine in February 2022 has caused untold human suffering. Vladimir Putin's war of choice not only threatens peace and stability on the European continent but is also a frontal assault on the basic rules of the post–World War II United Nations Charter. Ukraine has been an independent country since 1991. Russia's war of aggression to redraw country borders is an existential threat to Ukraine and a direct threat to the North Atlantic Treaty Organization (NATO) and the rules-based international order. The United States and many of its allies and partners are supporting Ukraine with materiel and training to ensure that the international order is upheld.

Both China and Russia threaten Asian and European geopolitical stability and the international order.[13] The challenge is likely to increase in the years ahead.

A Unifying Joint Vision: The Joint Warfighting Concept

The changing character of war and geopolitical landscape requires an interoperable, multidomain capable, joint and coalition force to demonstrate credible integrated deterrence. To remain the most lethal military in the world, the Joint Force needs a unifying concept and a faster process to field required capabilities. This means we also need authorities and a leadership model that drive deliberate Joint Force Development and Joint Force Design.

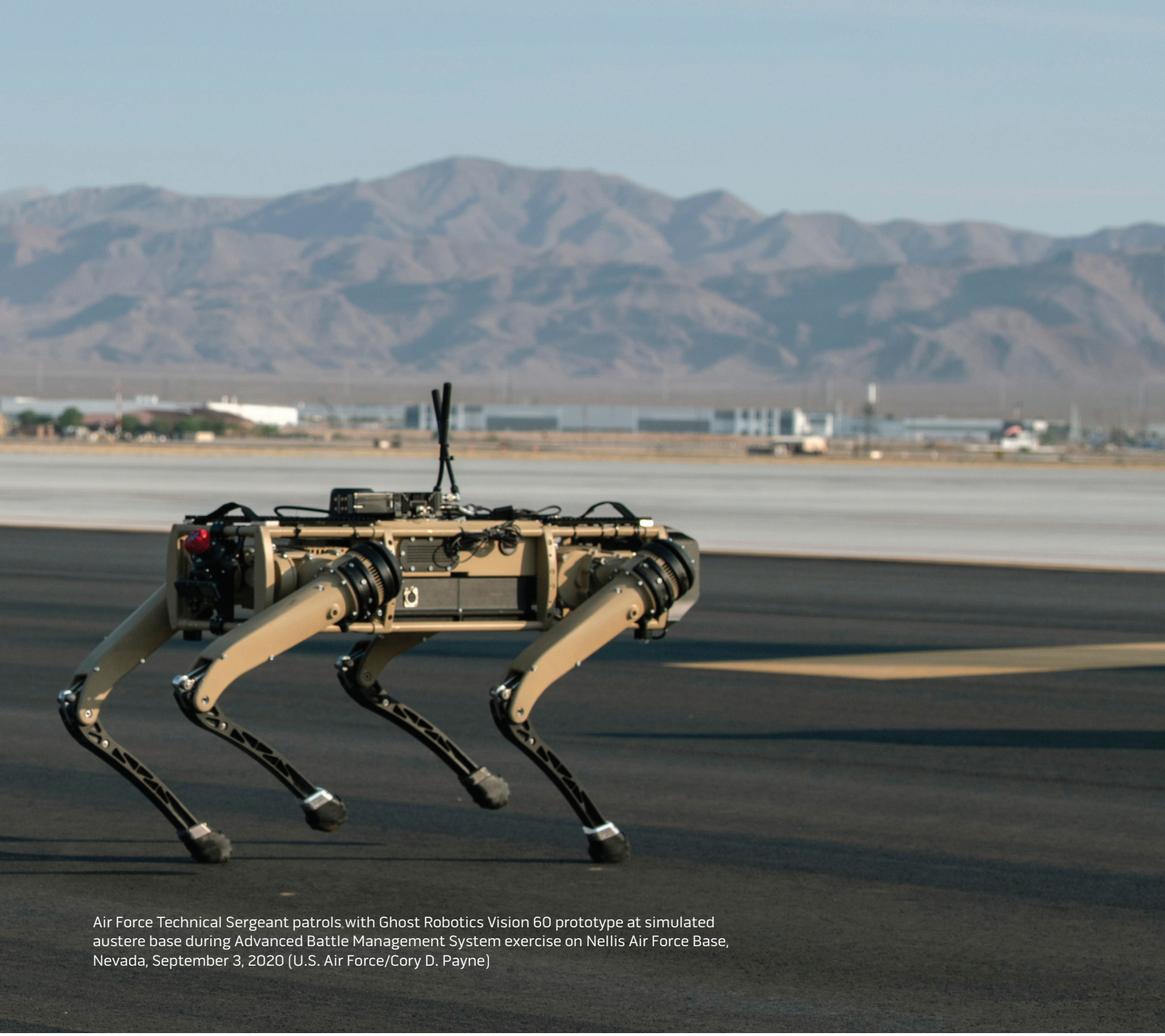
The most important thing we can do is to deter Great Power war from happening in the first place. We achieve deterrence by maintaining a highly ready, combat capable force in the present and modernizing the U.S. military to sustain dominant warfighting advantage in a future operating environment. When rational adversaries view the United States as dominant, they realize they cannot and should not engage in conflict with the United States. Implementing a joint warfighting concept is the best preparatory action to deter adversarial actors from military aggression and preserve peace.

The JWC is our roadmap to the future. It is a threat-informed, operational concept that provides an overarching approach to how the Joint Force should fight in a future conflict. After 4 years of focused development, wargaming, and experimentation, the latest version of the JWC provides a unifying vision for the Department of Defense (DOD) to *guide* Joint Force Development and Joint Force Design, *drive* DOD investment, and *inform* how we work in concert with allies and partners. The JWC is nested directly under the NSS, NDS, and National Military Strategy (NMS), so it also describes *how* the Joint Force will address the top four DOD priorities: defend the homeland, deter strategic attacks against the United States and its allies and partners, deter

aggression while being prepared to prevail in conflict, and ensure our future military advantage. Most importantly, it challenges the warfighter to make a fundamental shift in the way we think about maneuvering through space and time in a fast-paced, high-tech, rapidly changing, and exceptionally challenging and lethal environment.

The JWC's lineage traces back to the AirLand Battle (ALB) concept and doctrine developed in the 1970s and 1980s. In the 1970s, the U.S. Army and NATO Allies faced the threat of a conventional war in Europe against a numerically superior Soviet Union and its alliances through the Warsaw Pact. After witnessing the modern high-intensity conflict of the October 1973 Arab-Israeli Yom Kippur War, Army planners recognized that NATO and U.S. forces in Europe required new ideas of force employment.[14] The subsequent ALB concept reintroduced the operational level of war in its theory of winning decisive first battles on the ground and then conducting precision air interdiction of Soviet echelons.[15] The Army introduced ALB in the 1982 edition of Army Field Manual 100-5, *Operations*, and it dominated Army design, development, and education for the next decade.

ALB served as an example of successful bottom-up efforts; however, while ALB achieved collaborative force design and development between the Army and Air Force, it did not create necessary jointness to overcome conflicting visions of airpower and responsibility for long-range fires, nor did it incorporate significant roles for maritime forces.[16]



Air Force Technical Sergeant patrols with Ghost Robotics Vision 60 prototype at simulated austere base during Advanced Battle Management System exercise on Nellis Air Force Base, Nevada, September 3, 2020 (U.S. Air Force/Cory D. Payne)

The JWC describes how the Joint Force will operate across not only the air and land domains but also multiple domains (land, sea, air, space, and cyber) and systems. The JWC also provides Joint Force Design with enough flexibility to drive experimentation, exercise, and training of the Joint Force, while leveraging Service iteration and innovation. This JWC is truly *joint*.

Evolution of Concepts

In 1996, *Joint Vision 2010* claimed technology trends would change the character of war: "By 2010, we should change how we conduct the most intense operations. Instead of relying on massed forces and sequential operations, we will achieve massed effects in other ways."[17] Key terms included *dominant maneuver*, *precision engagement*, *full-dimensional protection*, and *focused logistics*.[18] The main idea that emerged—effects-based operations—changed the way we think about warfare.

By 2005, the *Capstone Concept for Joint Operations (CCJO) 2.0* recognized "dominance" may not be assured, so it called for the Joint Force to think differently and act from multiple directions in multiple domains concurrently, conduct integrated and independent actions, project and sustain the force, act directly on perceived key elements and processes in the target system, control tempo, transition quickly and smoothly among the various actions, manage perceptions and expectations, and act discriminately.[19] To accomplish this, the concept demanded certain traits of the future warfighter, including networked, interoperable, resilient, agile, and lethal.[20]

In 2012, the *Capstone Concept for Joint Operations: Joint Force 2020* recognized "the conventions by which wars are fought are no longer as settled as they once were. Notions of who is a combatant and what constitutes a battlefield in the digital age are rapidly shifting beyond previous norms."[21] In response, the concept proposed a new approach: globally integrated operations[22] with eight elements: mission command; seize, retain and exploit the initiative; global agility; partnering; flexibility in establishing joint forces; cross-domain synergy; use of flexible, low-signature capabilities; and increasingly discriminate to minimize unintended consequences.[23] Similarly, the 2012 *Joint Operational Access Concept* called for cross-domain synergy with a "more flexible integration of space and cyberspace operations into the traditional air-sea-land battlespace than ever before."[24] We knew over 10 years ago that a fully functioning Joint Force would need to outmaneuver, outthink, and outpace malign actors by remaining agile and working as a truly joint team.

Over the past 25 years, we have learned significant lessons. Whereas the 1996 *Joint Vision 2010* called for "full spectrum dominance," we know now that we cannot assume dominance in any domain. Where the 2005 *CCJO* assumed the Joint Force could move in multiple directions in multiple domains, we now know the Joint Force should not expect freedom of movement. In 2012, the *CCJO: Joint Force 2020* called for mission command but lacked mention of joint all-domain command and control.

The JWC builds on these lessons learned. We now have a truly joint all-domain concept. Next month, we will release Joint Publication (JP) 1, *Doctrine for the Armed Forces of the United States*. This updated doctrine will guide the Joint Force in how to fight in the years ahead.

Key Tenets of JWC and JP 1

- *Integrated, Combined Joint Force*: The concept emphasizes the need for seamless integration of all military Services across all warfighting domains, enabling them to function as a unified force. This type of integration involves synchronized planning, shared situational awareness, and effective communication across different Service components, fully aligned and interoperable with key allies and partners.
- *Expanded Maneuver*: The expanding operating environment means the Joint Force must also practice expanded maneuver. The JWC challenges the warfighter to think creatively about moving through space and time, including—but not limited to—maneuver through land, sea, air, space, cyber, the electromagnetic spectrum, information space, and the cognitive realm.[25]
- *Pulsed Operations*: A type of joint all-domain operation characterized by the deliberate application of Joint Force strength to generate or exploit our advantages over an adversary.
- *Integrated Command, Agile Control*: Seamless command and control across all domains. Effective command and control aims to integrate sensors, platforms, and decisionmaking processes to achieve real-time battlespace awareness and enable rapid decisionmaking.
- *Global Fires*: Integration of lethal and nonlethal fires to deliver precise, synchronized global effects across all domains and multiple areas of responsibility.
- *Information Advantage*: Leveraging advanced technologies, such as AI, big data analytics, and cyber capabilities, to collect, analyze, and disseminate information rapidly, enabling decision superiority and action.
- *Resilient Logistics*: A system that allows for rapid movement of personnel, equipment, and supplies to places and times of our choosing.

In addition to the tenets, the JWC also highlights individual and organizational *attributes*. We need our warriors, through selection and training, to possess the traits of agility, rapid decisionmaking, creativity, dispersed teamwork, and extreme resiliency in the face of intense hardship and continuous isolation. Future warfighting attributes must include speed, constant motion, relatively small size, lethality, and self-sustaining autonomous or nearly autonomous abilities. Warfighters must be masters of technological and physical camouflage, concealment, and deception.

Capability Development

While the Joint Force has naturally evolved over the years to identify and procure capabilities through processes and forums like the Joint Requirements Oversight Council (JROC), the Joint Force still lacks an organizational structure—or a coach with the right authorities—to hold the team accountable. The JWC, in and of itself, will not produce the objective Joint Force we need in the future. As aspects of the JWC are validated through rigorous experimentation and analysis, those pieces of the concept must be translated into military requirements, both materiel and nonmateriel. Moreover, they must be fully integrated across DOTMLPF-P before we achieve a true operational capability.[26] The JROC is where this happens. It validates these requirements and ensures we have the right people, equipment, training, leader development, and doctrine to deter and, if necessary, win in a future conflict.

Since its establishment in 1986, the JROC has primarily operated through a bottom-up process where combatant commands identified critical gaps in their operational employment concepts and the military Services sponsored requirements to fill those warfighter gaps. Over the last 4 years, the Vice Chairman of the Joint Chiefs of Staff, in collaboration with the Service vice chiefs, has focused the JROC on balancing nearer term combatant command needs with the pressing requirement to modernize the Joint Force. The JWC has been the North Star to this process, providing a list of Concept Required Capabilities—critical elements that enable concept execution. Moreover, in 2022, the JROC drove alignment of capability portfolio management with Office of

X-47B Unmanned Combat Air System demonstrator flies near aircraft carrier USS *George H.W. Bush*, May 14, 2013 (U.S. Navy/Erik Hildebrandt)

the Secretary of Defense integrated acquisition portfolios to further streamline procurement processes across DOD.

A Future-Focused Organization for Force Development and Design

The JWC and JP 1 have established a path to modernization. But these alone will not achieve the fundamental changes required to ensure the Joint Force outpaces any adversary and continues to deter aggression. In addition to these reforms, we need a future-focused organization that can drive change. In the 2022 NMS, we highlighted the need to balance both modernizing the Joint Force for future warfare and campaigning today in an era of Great Power competition.[27] The Joint Force can strike this balance by using strategic discipline—the ruthless prioritization of operations, activities, and investments to continuously calibrate Joint Force weight of effort between campaigning now and rapidly building warfighting advantage for the future.[28] It could seem like a struggle to balance "fight tonight" against "prepare to win tomorrow," but it is a false choice between current readiness and future modernization—we must do both with the assistance of a Joint Futures organization.

Army Futures Command (AFC) is proof that a future-focused organization can spark the changes required. The AFC model can be replicated at the joint level. It achieved undeniable momentum in delivering advanced capabilities to the warfighter faster. The Army established a four-star operational commander as an authoritative senior advocate for the future—combining the characterization of the future operating environment, concept development, experimentation, and requirements generation with clear priorities and direction. Unlike decades of failed programs like Comanche, Crusader, and Future Combat Systems, the Army is now putting the newest and most innovative technology in the hands of Soldiers. Like AFC, a Joint Futures organization would have the potential to align critical force design and development functions, integrate concepts with experimentation, and synchronize users to accelerate modernization and close capability gaps.

A Joint Futures organization would drive future Joint Force Design. It would be responsible for *characterizing* the future joint operating environment, looking beyond the current Future Years Defense Program. Building on the success of the JWC and JP 1, this organization would develop and iterate on future joint warfighting concepts. It would ensure capability development is threat informed

B-21 Raider is unveiled at public ceremony, December 2, 2022, in Palmdale, California (U.S. Air Force); Saildrone Explorer unmanned surface vessel and guided-missile destroyer USS *Delbert D. Black* operate in Arabian Gulf, January 8, 2023 (U.S. Navy/Jeremy Boan)

and concept driven. This organization would not monopolize joint concept development but rather serve as a lead agency that is responsible for collaborating with the Services and combatant commands to identify and help prioritize future operational problems while synchronizing development of warfighting solutions.

This future-focused organization would prioritize *joint experimentation* to ensure joint concepts are validated through rigorous wargaming, modeling, simulations, and other experimentation. This would strengthen Joint Force Design through competition of ideas, leveraging Service, industry, and academic innovation efforts. It would create experimentation venues to evaluate innovative tactical and operational solutions to inherently joint problems.

This organization would *integrate with allies and partners* from the very beginning of force design, looking to enhance not only the Joint Force but also the coalition force, through synchronization and integration of coalition design and development. Allies and partners give the United States an asymmetric advantage over competitors. Thus, including them in force design and development allows us to integrate and inform capability development across nations in a way that reduces redundancies, leverages strategic competitive advantages, and strengthens the coalition force, enhancing our alliances and security partnerships and, ultimately, strengthening integrated deterrence.

Finally, and most importantly, we would designate the leader of this organization as the senior advocate solely dedicated to focus on the future joint operating environment, concepts, force design, requirements, and doctrine. He or she would represent the future joint warfighter in decision forums. This leader and organization would maintain a persistent focus on the fundamental evolution required for our future Joint Force.

Conclusion

Nearly 2,500 years ago, Thucydides warned, "It would be a mistake for you to think that because of your city's present military might, or because of the gains you have made, luck will always go your way. Prudent men preserve their gains with a view to the uncertainty of the future and this makes them able to deal with disaster more intelligently when it comes."[29] We do not want disaster; we want to deter war, but if it comes, this Joint Force must be prepared to prevail.

The Joint Force faces an uncertain future, and the challenges are multifaceted, complex, rapidly approaching, and unrelenting—demanding comprehensive modernization of our forces, concepts of employment, supporting technology, infrastructure, and training. We are undertaking several initiatives to transform, such as the JWC, JP 1, and JROC revitalization, and developing a joint organization focused solely on the

future, unencumbered by current crises and near-term constraints.

I leave my post as the Chairman of the Joint Chiefs of Staff this fall, and after nearly 44 years of military service, I am confident that we will remain the most lethal, resilient, and capable force the world has ever seen, but we need to fundamentally change the way we do business, and we need to do it now. **JFQ**

Notes

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[26] While the official definition of DOTMLPF-P comes from the *Joint Capabilities Integration and Development System Manual*, the Defense Acquisition University defines *DOTMLPF-P* as Doctrine: the way we fight (for example, emphasizing maneuver warfare, combined air-ground campaigns); Organization: how we organize to fight (divisions, air wings, Marine Air-Ground Task Forces); Training: how we prepare to fight tactically (basic training to advanced individual training, unit training, joint exercises); Materiel: all the "stuff" necessary to equip our forces that *does not* require a new development effort (weapons, spares, test sets that are off the shelf both commercially and within the government); Leadership and education: how we prepare our leaders to lead the fight (squad leader to four-star officer, professional development); Personnel: availability of qualified people for peacetime, wartime, and various contingency operations; Facilities: real property, installations, and industrial facilities (government-owned ammunition production facilities); Policy: DOD, interagency, or international policy that impacts the other seven nonmateriel elements," https://www.dau.edu/acquipedia/pages/ArticleContent.aspx?itemid=457.

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[28] Ibid.

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