Transcript: Gen. Whiting keynote at Space Mobility Command, Jan. 28, 2026 (As Delivered)

It is truly a pleasure to be here as our nation celebrates our 250th year, and as you can see, at U.S. Space Command, we're celebrating with a new logo, which highlights the heritage from a Minute Man of the Revolutionary War to the futuristic space systems our Joint Force operates today.

You know, 250 years ago, the founders struggled to defeat the British and toiled in the complexities of what it would mean to become a new nation, and that complexity was baked in right from the very beginning of our nation, as our Founding Fathers fought for independence from the British Crown, even as they declare that they were fighting for the rights that they believed were God-given to them, as they would have said, as Englishmen. And we continue to see those complexities today,

[VIDEO: "Washington's Dream" c/o SNL]

Okay, so maybe we'll just stick to kilometers in the rest of the briefing today.

You know 100 kilometers above the Earth's surface is where U.S. Space Command's area of responsibility begins. And as a combatant command, we are required by Title 10 of U.S. federal law to plan for the employment of the armed forces, to take actions to deter conflict and to command forces if necessary, to fight and win in our theater of operations.

Now, as our command headquarters is moving from Colorado Springs to Huntsville – Rocket City – Alabama, I've been thinking a lot about the significance of the mobility of our forces, and how in order to win core warfighting tenants must be adhered to. Principles and functions like maneuver, movement, unity of command and sustainment, those which our nation's earliest military leaders successfully utilized to defeat the British. Those are still relevant today, principles and functions we need to carry in the space.

So, what is maneuver warfare? For a definition, let's turn to Marine Corps doctrinal Pub. 1, also known as Warfighting. That doctrine says, "maneuver warfare seeks to shatter the enemy's cohesion through a variety of rapid, focused and unexpected actions, which create a turbulent and rapidly deteriorating situation for which the enemy cannot cope." As we will discuss in a moment, this definition has been informed by the theories of John Boyd.

In maneuver, warfare forces avoid the enemy's strengths and target their vulnerabilities and maneuver in multiple dimensions – spatial, temporal and psychological – to create dilemmas, paralyze decision making and collapse the enemy from within. As a Joint Function, we describe it as the coordinated movement and maneuvering of military forces to achieve positional advantage.

From our nation's Continental Army of 1776 to the Joint Force of 2026, time and again, the maneuver enabled by sustainment has stood out as decisive, leading to victory in many battles and many conflicts.

In the American Revolution, our Continental Army employed these functions much more effectively than the British. Americans favored dispersed, mobile operations, like infantry and Militia units, that could strike, fade and relocate quickly rather than fight long, linear battles. And the support of our allies, with the French as our first, was also key to the American victory, providing instruction on military tactics, supply of key armaments, and then fighting with us in joint operations, both in Army and naval engagements.

But history is full of examples of defeat when maneuver and sustainment were not properly considered. For example, imagine a line that France tried to utilize in World War II. The Germans employed combined arms surprise and the rapid force concentration of a new doctrinal concept, or something we all know is Blitzkrieg, to bypass those French defenses. They moved quickly and masked at the weak points.

In space, we also need the ability for swift and sustained combat operations, such that we can position ourselves for advantage and put the adversary in positions for which they cannot cope. Said plainly, we need maneuver warfare in space.

Now since World War II, the U.S. military, for the most part, has achieved and maintained unrivaled lethality. Now what are some of the causes for that success?

First, our nation's defense industrial base has had no peer for the past 85 years. Our commercial industry has consistently pumped out quality and quantity, pioneering better equipment at scale, as well as better technology, usually, but not always.

At the beginning of World War II, both German and Japanese aircraft were generally considered to be technologically superior. And during Korea, the swept-wing MiG-15 was a better aircraft than the straight-wing fighters the U.S. fielded at the beginning of that conflict. But, we had better training and we had the ingenious American warrior. The intuition, the optimistic can-do spirit and the innovation of the American people are asymmetric advantages for any conflict. The creativity, self-reliance and community spirit of our populace, when properly employed, will guide our nation to victory through trust, initiative and adaptability.

And finally, building on decades of experience, one of our enduring advantages is our rich tradition of joint warfighting. Often employing maneuver warfare across multiple domains and steeped in doctrinal concepts of warfare.

If we're going to deep dive into the Joint Functions of maneuver and sustainment, you know, I'm going to have to talk about these military theorists. And in fact, there's an old saying that says, it's not really a military briefing until you quoted a dead Prussian.

But let's start with Sun Tzu, who wrote, "There is nothing more difficult than tactical maneuvering."

Now imagine what he would have written if he had considered tactical maneuvering in space, in which to catch up to a spacecraft ahead of you in the same orbit you first must slow down. Or if you want to reach a higher orbit in which your speed will be slower, you first must speed up.

Sun Tzu also wrote, "an Army without its baggage, without its provisions, it is lost."

Now, let's get to that deceased Prussian Carl von Clausewitz, who, in my estimation, is the military theorist who has most influenced our modern conception of warfare. He wrote, "the end for which a soldier is recruited, clothed, armed and trained, the whole objective of his sleeping, eating, drinking and marching is simply that he should fight at the right place and at the right time.

Said differently, we must have the logistics and sustainment necessary to enable fighting when and where we need to now.

Now, tying it all together is Col. John Boyd with his famous OODA Loop. He said, "through the high tempo of operations, constantly shifting of forces and fluid, flexible action, the enemy will rapidly lose control, cohesion and momentum. The friendly force must emphasize superior speed and tactical unity, including superior mobile units with essential logistics located forward."

Now you can see how Boyd's theories influenced the Marine Corps definition of maneuver warfare that I mentioned earlier. With these historic military figures putting such emphasis on maneuver and sustainment, it's no wonder that they make up two of our seven joint warfighting functions.

So, let's take a look at a more modern illustration of these functions effectively employed.

Look, now one example of that would be Operation Desert Storm, maneuver warfare at its finest. And it's often mentioned "Left Hook" in air war. But Desert Storm did not just happen, it was the culmination of 15 years of work. Instituting the lessons of Vietnam, applying the air, land battle doctrine that had been developed in the 1970s, leveraging the equipment procured in the 1980s to execute that doctrine. And it was all sustained by a robust and professional logistics force, deriving the benefits of joint warfighting as laid out in the Goldwater Nichols Act. And then with constant training exercises and rehearsals in places like the National Training Center – Red Flag, Fallon and 29 Palms. And it worked spectacularly.

Any force that seeks to be successful in maneuver warfare has some basic requirements. They need, maneuver-focused doctrine, and tactics, techniques and procedures for their domain and integrated jointly. They need sensors, C2 systems, platforms and effectors that can enable the needed agility and

speed. They need to exercise, exercise, exercise, to test, refine and rehearse their TTPs and develop the most important component of maneuver warfare – our warriors.

And those warriors need decentralized mission command, or else the tactical level will have to wait for the orders from the higher level before taking action. And those higher levels will act without the unique visibility of the tactical level. They need to emphasize surprise, unpredictability and deception in their plans and operations. And they also need the enabling capabilities such as mobility, logistics and sustainment infrastructure to keep things moving

Let's think about the terrestrial services in the Joint Force – the Army, the Navy, the Air Force, and the Marine Corps. They do not just have maneuver warfare because they want it. They have it because they have invested, over decades, into sizable force structure that enable them to execute those kind of operations.

We even have an entire U.S. combatant command, U.S. Transportation Command, that is focused on this idea of mobility and maneuver. And so, I think it's worth pausing and considering the enormous investment of these forces that they have to enable maneuver warfare.

For example, the U.S. Navy, it needs deep water ports around the globe for replenishment and repair options. It has nuclear reactors for unrefueled longevity of operations. I'm not a Sailor but think about the infrastructure that goes into provisioning and sustaining those nuclear reactors. And they require at sea and underway replenishment for their ships and submarines.

According to Adm. Nimitz, this capability was the key factor for the U.S. Navy winning in World War II in the Pacific. In fact, of the U.S. Navy's nearly 300 strong fleet of ships, about 30 are dedicated to logistics and supply. With Military Sealift Command, adding another 80 or so ships to the sustainment function.

Now for the Air Force's maneuver and sustainment, it needs aerial refueling capability. So much so that about 14% of its aircraft inventory is dedicated to aerial refueling. That's something around 500 KC-135, and KC-46s. Now, think about how many Wings of Airmen that is to ensure U.S. military aircraft can maneuver around the globe as needed for mission success.

To ensure rapid deployment and sustainment of forces in case of conflict, the U.S. Army and U.S. Marine Corps maintain a global distribution of pre-positioned stocks across the U.S. and abroad. These pre-post stocks kept ashore and afloat, include a wide range of material – everything from combat vehicles, including M1 [Abrams] tanks to M2 Bradley Fighting Vehicles, to sustainment supplies such as ammunition, fuel, medical equipment, food and water – to keep Soldiers and Marines ready and able to fight for weeks and months.

Space Forces as well have maneuver and sustainment needs, including spaceports, boosters, refuelers, servicers, maneuvering space vehicles to hunt and evade, and ready stops of servicing and replacement satellites that can be rapidly launched. Over time, I predict the force structure dedicated to supporting the maneuver and sustain the needs of the Space Forces will have to rival in size and scope, relative to the number of space systems we have that of the other domains.

And we aren't the only country that understands the need for maneuver enabling space capabilities. Our opponents realize this need to maneuver and be sustained in space.

China's buildup of space capabilities in quantity and diversity is nothing short of jaw-dropping – from damaging lasers to jamming against comms, radar and navigation, to the fielding of anti-satellite weapons able to reach GEO at 36,000 kilometers. The Chinese Communist Party's advancements threaten our advantage in space.

Similarly concerning is Russia's reported intention of fielding a nuclear weapon on orbit, as a nuclear detonation in outer space would cause devastating consequences for the United States, the world and the global economy.

China's developing on-orbit servicing, as witnessed by their recent SJ-21 and SJ-25 docking and potential refueling demonstration. They launched their inspect and repair system stating its intended use. And we have witnessed them conducting maintenance operations and refueling of their space station, and they're increasing the launch of undeniable dual-use capabilities.

This concerns me, as these capabilities in concert reveal a push to develop a systemic on-orbit refueling and logistics capability, which, if effective as intended, has the possibility to degrade our current space superiority.

Dogfighting in space takes fuel. And if the Chinese are refueling their effectors, what happens when we run out of maneuver in a fight? What happens when one dog is chained to a spot and the other can move? What dog do you want to be? And what happens when one of our key legacy systems, what we call our high value assets, like SATCOM GPS or missile warning, perhaps launch with only enough fuel for to execute station keeping over its lifetime. What happens when it's approached by a refuellable dogfighter, who has the advantage?

We cannot allow our competitors to have superior maneuver capabilities in space any more than we would allow it on the land, at sea or in the air. It is our collective responsibility to ensure we maintain our superiority.

One unique American advantage over our competitors is our integration with our allied and commercial teammates. As mentioned earlier, during the Revolution, America did not fight alone. Financial and military support from France, Spain and Native American nations aided our fight for independence.

Our coalition has evolved over the past 250 years, with many robust alliances to this day, including in space. Where one of our commands greatest strengths lies with Operation Multinational Force - Operation, Olympic Defender, our seven nations strong, integrated space operational team. And U.S. Space Command is exercising maneuver warfare with members of this coalition.

In 2025, we executed bilateral rendezvous and proximity operations, or RPOs, as we call them, with France and the UK. Building on our first combined military space maneuvers in 2024. It's a testament to the success of MNF-OOD.

Allied Space Forces understand the need to maneuver, but we are limited in performing these exercises due to resource constraints.

U.S. Space Command also integrates well with all of our commercial partners, some of whom have demonstrated on-orbit capabilities like RPOs.

We look forward to participation by some of these companies and others in our first ever commercially integrated, classified tabletop exercise starting in March. We're going to host four of these quarterly TTXs with select commercial partners. And the first exercise will focus on the threat of weapons of mass destruction.

Now, another space maneuver related success is our national and commercial launch capabilities. Our ability to quickly and overwhelmingly redeploy and reconstitute our on on-orbit assets reliably in a contested environment is a national strategic advantage and outpaces all of our competitors. This advantage is one we should continue to grow and leverage, but one we should not allow to become a single point of failure.

And while getting to space is crucial, we also need capabilities to sustain our assets once they are on orbit. The biggest challenge for us to improve our maneuver and sustainment in space is the tyranny of distance.

The Pacific Ocean is about four and a half times the width of the U.S., the distance to geostationary orbit. Eight times the U.S. width, distance to the moon, where the next key terrain lies, 85 United States. Or to put it another way, approximately the combined diameter of all the planets in our solar system, all eight of them, can fit between the Earth and Moon. And back in my day, we could have even squeezed in a ninth planet. So, long live Pluto.

Okay, one more interesting stat, the volume of space between low Earth orbit and geosynchronous orbit is 312 trillion cubic kilometers. How many cubic miles is that? Nobody knows, as Nate Bargatze said today. Attempting to sustain our forces in this vast space without on-orbit servicing is like sending an aircraft carrier strike group across the Pacific with only the fuel in their tanks, and no way to refuel, re-arm or repair.

In World War II, our Navy chose underway sustainment and the ability to refuel, re-arm and repair ships anywhere in the ocean. Japan chose rear sustainment, and we know how that turned out for space.

Earth is the rear, far from the theater of operations, particularly in GEO and Cislunar orbits. Said differently, terrestrial-based sustainment creates the longest supply chains in the history of warfare, in some cases by orders of magnitude.

But if we are to effectively war fight and war win in space, as required by law, we must enable space maneuver with our version of underway sustainment.

Now to meet this challenge, we have many needs. We're going to need proliferation of some of our constellations, most evidently low Earth orbit communications and ISR. Like terrestrial domains, we also need platforms with thrust and enduring delta V, particularly for inspector satellites and high value assets. We need fast, repeatable, resilient, cyber-hardened access to space, through both launch and the satellite control network.

We need to improve our readiness through joint and combined exercise. Like fighter pilot training stories, space warfighters must consistently train to test and extend the maneuver envelope. And our domain is ideal for High Fidelity modeling and simulation trainers.

We need TTP development and unit training on those TTPs for iterative practice without regret, to the effectiveness of the systems. And all of this builds readiness. It builds confidence. It builds a warfighting culture – ready to execute mission command.

When, however, we are constrained to operate only with the fuel we launch with, it causes a psychology of scarcity in the mind of the mission planners and decision makers. And it truly permeates our entire enterprise. The resulting and very real risk of consuming fuel and mission capacity and life of the satellite with no ability to replenish, centralizes decisions to maneuver and operate, and therefore it just virtually removes maneuver from the tactical commanders decision space, and moves us away from mission command.

But if we can decentralize execution, it enables campaigning and warfighting in space. And this demonstrates peace through strength. And all of this requires on-orbit resupply, logistics and sustainment. And just like every other domain, we need a committed force focused on logistics.

So, let's look back at a time when our nation's military faced a similar emerging problem, but in a different domain. In 1941, Gen. George Marshall and the U.S. Army, recognizing the changing character of war and the increasing possibility that the U.S. would enter the war in Europe, initiated a massive, armored exercise of thousands of vehicles and hundreds of thousands of Soldiers across muddy acres of Louisiana and Texas.

These maneuvers were designed to test new tactics and new technologies. The blue team was led by Maj. Gen. Patton, a two-star at the time. And Dwight Eisenhower, only a colonel, led the red team. All of this was done before Pearl Harbor, before the U.S. was at war, but as a preparation in case war was to come.

During the maneuvers, one of Patton's more famous moments came when the tanks, moving at full speed on the attack, ran out of fuel. There were no supply trucks to be found. He had outrun them, and Patton wasn't about to sit around waiting for logistics to catch up. So, what did he do? Patton drove his tanks straight to a public gas station. Imagine, a tank commanded by George Patton, engine rumbling, pulling up to a little gas station in rural Texas.

Now, Patton's gas station stop highlighted an immediate need for fuel, but the maneuvers exposed deeper systemic operational and logistical deficiencies. The older tanks were slow and under gunned. Communication was spotty, supply lines failed. Combined Arms effects with the air corps were minimal.

Now, as a result of that exercise, the Army developed a new technology, a superior medium tank, the M4 Sherman. They created a faster, more agile supply chain, including fuel distribution. And they established dedicated tactical air units and specialized air ground liaison teams. And the Army promoted the leaders, Patton, Eisenhower, Bradley and others, that adapted to the new realities that that exercise eliminated.

So, should we conduct our own Louisiana maneuvers? What would a Louisiana maneuvers exercise look like in a space warfighting context?

Applying the years of research and development and analysis done within the Space Force, FFRDCs, commercial sector and academia, what if we exercised our satellite maneuver warfare concepts and capabilities at an unprecedented scale. Simultaneously moving satellites while also reconstituting those attrited through responsive launch. We could also maneuver our SATCOM, PMT and telemetry, tracking and commanding services in the electromagnetic spectrum.

We need to look at what our supply chain limitations are and how to overcome them, and how the red team adversary matches up, where our technologies fall short, and how our TTPs could evolve. We

know we'll have to do all of these things throughout all levels of conflict in a real fight. This exercise would show us if we are slow and under gunned and how our support to the Joint Force is effective.

Now, to be fair, we do individual elements of this exercising in some of the different venues that are highlighted on this chart. And recently, we held a senior level tabletop exercise at U.S. Space Command called Zoom Racer for sustained maneuvering and refueling. This TTX gave us insight into the required training, massing of forces, maneuver and supported campaigning, obfuscation and so much more.

But we haven't exercised holistically in this way. And one of the reasons is that we need better sustainment and logistics capabilities to enable this type of large scale exercise and to refuel and replenish ourselves at the end of such an exercise. Rather than the Louisiana maneuvers, perhaps we should call them the Apollo maneuvers. But whatever we call them, these maneuvers must be done before conflict, because if we wait until crisis, we won't have the time or capacity to exercise.

If we get this right, we will gain the ability to pivot from static attrition warfare to maneuver warfare. With better logistics comes better available posture, increased forces and footprints. With reusable, refillable capabilities we empower lower-level tactical decision makers. We improve mission command. With increased maneuverability, our predictability decreases, and our ability to position ourselves for advantage increases. Maneuver warfare in space, much like its terrestrial counterpart, is not just about maneuvering assets, it's about manipulating the adversary's perception and decision making cycles.

But if we don't get this right, we will lose our advantage to sustain operations in protracted conflict in space. We will reduce our ability to execute mission command for space functions. Our Joint Force will be at risk.

Our mission is to close long range kill chains, to affect satellites, missiles, aircraft, ships, tanks and bumpers, and to interdict our adversaries' space enabled kill chains. This will not happen if we put static or tethered, meaning one-fuel tank of maneuver per satellite, forces against maneuvering forces refuellable forces. If we don't get this right, our mission will be at risk. History is full of examples of where movement beats fixed, even fortified and fixed. If we cannot sustain presence and maneuver for advantage, the lead we have in space will be fleeting.

Space is inherently expeditionary. Our operations and activities unfold in a remote and unforgiving environment, sometimes tens of thousands of miles away from any sort of terrestrial Garrison or support infrastructure. The immense distance creates profound logistical hurdles, demanding unparalleled foresight and self-sufficiency.

As the space domain becomes more congested and contested the ability to maintain advantage through maneuver and sustainment is only going to grow imperative. We cannot afford a static posture. The

capacity to reposition assets, replenish resources and repair systems on orbit allow us to dictate the operational tempo and outlast any atmosphere.

Victory in space will not be won by those with the most assets, but by those who are fastest, more agile and can sustain through a protracted fight. Success will belong to the side that can dynamically respond to threats and maintain operational endurance long after the first strike. The choices we make in the next few years, will decide whether space sustainment becomes a vulnerability or our most significant advantage.

Next month, NASA's Artemis program will take astronauts for a trip around the moon, in preparation to return Americans to the lunar surface and continuing to forge a path for a permanent base. We are on the cusp of a new frontier with deep space exploration to Mars and beyond. This future beyond Earth, however, will only be realized if we commit to securing and safeguarding it.

The challenge is immense. Yet, we have faced such odds before, 250 years ago, out of necessity, our nation's fledgling Army, Navy and Marine Corps, supported by key allies, defeated a stronger, larger, better equipped foe by effectively employing maneuver warfare enabled by critical sustainment. And they changed the world by bringing forth on this continent a new nation conceived in liberty and dedicated to the proposition that all men and women are created equal. They even laid the foundation that our first foe, the United Kingdom, now is one of our closest allies, including in space.

To win in a contested space theater of operations today, we must draw on the same legacy of ingenuity and logistical mastery to protect that amazing future which is coming.

So, I want to thank the Space Mobility Conference for the opportunity to be here. I look forward to engaging with some of you throughout the morning and thank you very much.