



Launch Pads Struggle to Keep Pace With Expanding Industry

U.S. capability to launch national security payloads into orbit is blossoming as companies such as Blue Origin and Rocket Lab enter the military space launch business alongside incumbents SpaceX and United Launch Alliance. Their arrival bolsters the competitive diversity the Pentagon has long sought for assured access to space. But according to analysts, the capacity these companies add will strain the nation's space launch infrastructure.

"The logjam has already started. I lost two launches this year due to range congestion entirely. At one point I had an Atlas rocket sitting on a launch pad for a month waiting for an opportunity to fly," United Launch Alliance CEO Tory Bruno said in an interview in late December, shortly before he resigned as leader of the Boeing-Lockheed Martin joint venture.

Bruno — who the day after Christmas was announced as Blue Origin's new president of national security — was echoing concerns shared by the Space Force.

"We have more launch service providers and that allows me to service more of the customers that I have on the Department of War side," Col. Eric Zarybnisky, the Space Force's program executive officer for Assured Access to Space, said in an interview. "It really does drive competition, which is good for all of us. It increases reliability. It drives down the cost. So it gives us more capability at a lower cost to the taxpayers."

But Zarybnisky and the commanders of the Space Force's two primary vertical launch facilities — the Eastern and Western ranges at Cape Canaveral Space Force Station, Florida, and Vandenberg Space Force Station, California — acknowledged that while they have no immediate reservations about congestion, the rate at which launches are increasing at both stations will challenge their capacity. A record-breaking 109 launches took place in 2025 at Cape Canaveral, the Space Force's busiest launch facility due to its East Coast location, favorable for sending payloads to a variety of orbits and inclinations.

"If you look at the manifest just five years ago, we had 20 launches in a calendar year," said Col. Brian Chatman, Space Launch Delta 45 commander and director of the Eastern range.

"If you look at the manifest five years from now, we anticipate upwards of 300 to 400 launches happening off the Eastern range."

Chatman's California counterpart, Col. James Horne, who commands Space Launch Delta 30 as director of the Western range, where payloads bound for polar orbits begin their journey, outlined a similar progression at Vandenberg.

Since 2019, there have been 253 launches from Vandenberg, with 51 ascending in 2024 and a record-breaking 72 in 2025 — a 1,300 percent increase over the period and "more than we've launched since the 60s," according to Horne. Those are remarkable numbers, as Horne noted.

But Charles Galbreath, director and senior resident fellow for Space Studies at the Mitchell Institute, cautioned that the number becomes much smaller if SpaceX launches are removed from the U.S. manifest. To continue reading, please click [here](#).

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Jeff Bezo's Blue Origin Launches Satellite Internet Service to Rival SpaceX, Amazon

Jeff Bezos' space venture Blue Origin announced Wednesday it plans to deploy 5,408 satellites into space for a communications network that will take on SpaceX and Amazon. The network, called TeraWave, is targeted for enterprise, data center and government users.

The company said it will provide data speeds of "up to 6 terabits per second" from satellites positioned in low Earth orbit and medium Earth orbit, regions of space that are between 100 miles and 21,000 miles from the Earth's surface. Blue Origin said it expects to begin deploying its constellation in the fourth quarter of 2027.

Bezos is entering an increasingly crowded satellite internet market that's currently dominated by Starlink, a service operated by Elon Musk's SpaceX. Starlink has more than 9,000 satellites in orbit and roughly 9 million customers. Amazon, which Bezos founded in 1994, has also ramped up its own offering in the past year. The service recently rebranded from Project Kuiper to Leo. The company has sent up 180 satellites since last April through a series of rocket launches handled by partners such as United Launch Alliance and SpaceX. Several future deployments are expected to be handled by Blue Origin.

Amazon aims to build a constellation of 3,236 low Earth satellites that will serve businesses, governments and consumers. Last November, the company opened up an "enterprise preview" to select users ahead of a broader commercial launch.

Bezos predicted in 2024 that Blue Origin would one day be a bigger company than Amazon. He founded Blue Origin in 2000, and Dave Limp, Amazon's former devices boss, serves as its CEO. "I think it's going to be the best business that I've ever been involved in, but it's going to take a while," Bezos said in a 2024 interview at The New York Times' DealBook Summit.

Blue Origin is primarily a rocket launch company, flying tourists and research to the edge of space on short trips. Last January, the startup notched a major milestone when it successfully launched its towering New Glenn rocket for the first time, though it was unable to return the rocket's booster back to a barge for reuse. Blue Origin nailed the landing of its New Glenn rocket booster last November following the successful launch of a pair of NASA spacecraft. To continue reading, please click [here](#).



Battle of the Stretches: A220-500, A350-2000, or 777-10X Models Could Launch in 2027

2027 may be the year that both Airbus and Boeing launch new aircraft programmes, according to leading aviation lessor Avolon. The company believes a new aircraft program is imminent, predicting that we could see the launch of Airbus A220-500 or A350-2000, or, for Boeing, the 777-10X. Avolon believes these could be announced next year, which could be the next page turner in this decade's aviation history.

Avolon released its 'Up Next' report on January 23, which analyzed and predicted what could be next for the world's two largest plane makers. The forecast includes what is expected to be the top industry profits, surpassing \$41 billion, which is attributed to continued economic growth post-pandemic and lower-than-usual fuel prices. From narrowbody to widebody, new aircraft types could be on the horizon.

Many commercial aircraft feasibility studies are already underway, albeit kept quiet by both Airbus and Boeing, which could see the manufacturers announcing their latest chapters in existing programs. Some critics may be quick to judge that even for Boeing, as the company is still trying to get the 777X project delivered to the first customer, but that is not stopping these two plane makers.

Such suggestions for new aircraft could include the Airbus A220-500, an extended design of the popular A220 model, which would target between 160 and 190 passengers onboard. This would be a brilliant bridging of the gap between the current A220 models and the Airbus A320neo. If such a variant were to be announced, this would be a direct competitor to the 737 MAX 8, and aim to offer superior fuel efficiency to that of its rival, and include a stretched fuselage to the Airbus A220-300, additional overwing exits, and would be anticipated to enter service in the next decade.

For Boeing, a suggested 777-10X is the idea of a stretched 777X variant that could carry up to 450 passengers. This would be considered an approximate placement for the Airbus A380 or Boeing 747, and add approximately four extra rows to that of the 777-9. This would be expected to be equipped with General Electric GE9X, with folding wingtips and many other characteristics as those of the other 777X variants.

If the Airbus A350-2000 comes to fruition, it would be an ultra-high-capacity stretched variant of the A350-1000. This would be a direct competitor to the 777X, and would be aiming to transport more than 400 passengers across multiple classes. This would become the longest variant of the A350 family.

Many of these aircraft concepts continue to be in the design phase, and would require significant additional research into the engineering, landing gear requirements, and weight and range capabilities to understand if these concepts are what the industry needs before taking the next steps. To continue reading, please click [here](#).



Pentagon to Invest \$1 Billion in L3Harris Rocket Motor Business

The U.S. government will invest \$1 billion in L3Harris Technologies' growing rocket motor business, guaranteeing a steady supply of the much-needed motors used in a wide range of missiles such as Tomahawks and Patriot interceptors.

Shares were up 11.4% in pre-market trading in New York. The deal represents the latest U.S. government investment in Corporate America, which has included a 10% stake in chipmaker Intel and investments in critical mineral producers. It comes just a few days after President Donald Trump blasted defense contractors for slow production of weaponry.

L3Harris said on Tuesday it is planning an IPO of its growing rocket motor business into a new publicly traded company backed by a \$1 billion government convertible security investment. The securities will automatically convert to common equity when the company goes public later in 2026.

"We are fundamentally shifting our approach to securing our munitions supply chain," said Michael Duffey, Under Secretary of Defense for Acquisition and Sustainment. "By investing directly in suppliers we are building the resilient industrial base needed for the Arsenal of Freedom."

The investment in a defense contractor is not a total surprise after U.S. Commerce Secretary Howard Lutnick last August said the Trump administration was weighing equity stakes in major defense contractors, including Lockheed Martin. The investment in Intel has been a boon for the company, whose shares have more than doubled since the announcement. But the government's equity position in L3Harris could face blowback from L3Harris' rivals, given that it creates a potentially significant conflict of interest for the U.S. government. The Pentagon will have an ownership stake in a company that regularly bids on major defense and other government contracts.

The investment marks the first direct-to-supplier partnership of this kind and is an outcome of the department's new Acquisition Transformation Strategy and its "Go Direct-to-Supplier" initiative. The strategy calls for the department to negotiate and invest directly with critical suppliers to save money. L3Harris' Missile Solutions unit, which produces missile propulsion systems for many missiles including Patriot, THAAD, Tomahawk, and the Standard Missile, will be carved out from the company. L3Harris will retain majority ownership and control of the new entity. The deal all but guarantees a steady flow of business for the new unit. To continue reading, please click [here](#).



Precision Additive Launches World's Fastest and First Artificial Intelligence LPBF 3D Metal Printer

Precision Additive today announced that its first metal additive manufacturing system, the PA-300, is officially launched. The laser powder bed fusion (LPBF) printer is designed to produce high-quality, qualification-ready components for defense, aerospace, energy, medical, and other mission-critical applications requiring reliable, U.S.-based manufacturing. It's the fastest printer ever made using its proprietary SSLM laser technology and built with intelligence powered by AI architecture.

The PA Series combines proprietary high-performance laser technology, artificial intelligence, and Precision Additive's qualification process to deliver faster, more reliable metal printing. Its advanced SSLM™ laser enables build speeds up to ten times faster than conventional systems, directly improving production performance. Embedded AI continuously monitors the build and automatically corrects deviations in real time, creating a "self-healing" process that protects part integrity.

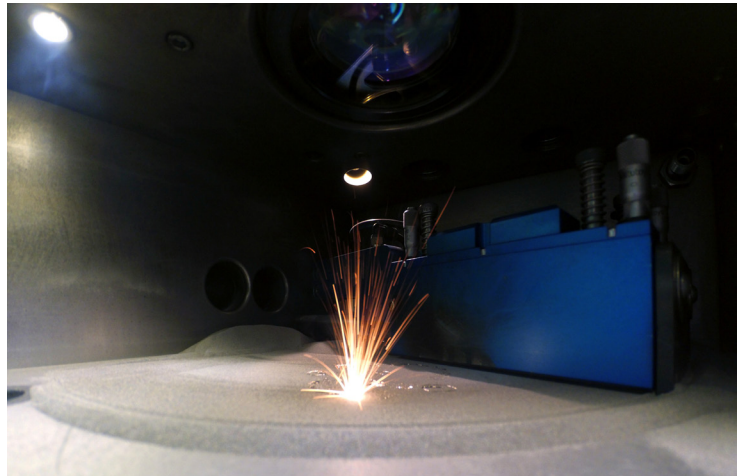
These capabilities are unified through Precision Additive Qualification (PAQ), a data-driven framework that ensures consistent, repeatable results from build to build. Together, this tightly controlled process makes it possible to reliably print magnesium alloys - a lightweight but highly reactive material that has historically been difficult to manufacture using additive technologies.

The PA series of machines is configured to print metal alloys, including hard to print materials like magnesium, tungsten, and copper. Magnesium processing represents a key differentiator for the PA machines.

"As defense programs face fragile supply chains and increasing reliance on foreign sources for high-complexity parts, domestic manufacturing capability has become essential to readiness," said Jon Haase, Chief Strategy Officer and President of Government Business. "The PA machines are designed to restore secure U.S.-based production. These machines are critical to US defense and exceed international printers."

"Additive manufacturing is entering a new era defined by intelligence, reliability, and accountability," said Bala Anand Jeldi, Founder and CEO of Precision Additive. "Precision Additive was created to ensure advanced manufacturing systems are not only innovative, but dependable enough to support the most demanding applications."

Jeldi brings more than 20 years of experience in additive manufacturing and magnesium alloy applications across space, defense, and automotive industries. To continue reading, please click [here](#).



UPM Advanced Solutions' Plate & Powder Industry Compatibility

UPM Advanced Solutions provides high quality build plates and powder grades for a variety of industries. These industries that rely on additive manufacturing choose different grades to meet the demands of their applications depending on mechanical performance, thermal behavior, and process reliability. At UPM Advanced Solutions, we understand the importance of having the right materials to match your project, and we are here to tailor our solutions to meet customer's evolving needs. Learn more about UPM Advanced Solutions' plate and powder options by clicking [here](#).

Aerospace

The most common powder grade used within the aerospace industry is Inconel® 718 due to its balance of strength, stability, and manufacturability. Additionally, Inconel® 625 and Ti-6AL-4V powders are used in the aerospace sector. These same three grades are the typical build plate materials used for aerospace as well, with tool steels occasionally being used instead as a practical and cost-effective material. High-value aerospace programs often match build plate alloys to powders to help reduce thermal and qualification variables.



Medical

Stainless steel grade 316L is the most common powder used within the medical and dental industry due to its biocompatibility, reliability, and predictable processing. Powder grades like Ti-6AL-4V, Ti-6AL-4V ELI, and 304L are also regularly used in the medical industry and all feature excellent corrosion resistance and smooth surfaces for hygiene. For build plates, titanium and stainless steel 316L are the primary materials. Many medical customers match build plate and powder grades to support validation and repeatability, though tool steel plates are also used in qualified processes.

Automotive

For the automotive industry, aluminum alloy powders, especially AlSi10Mg, are most common. Other powder grades include M300 and 17-4 PH stainless steel. For build plates, this industry primarily uses tool steels, including grades 1045 and 4140, due to their stability, durability, and cost-efficiency during high-output production. Plate matching to powder is uncommon and typically driven by customer-specific process controls.

Energy & Power

There are several common powder grades used for the energy and power industries, including Inconel 718 & 625, 316L, 17-4, and copper alloys GRCo-42, GRCo-84, and CuCrZr. When it comes to build plates, Inconel 625 & 718 are most common, especially for nickel and copper builds. These applications often favor plate-to-powder alignment due to thermal loads and long build times.

Long Products Used in the Medical Industry

United Performance Metals is your medical material supplier, with a variety of long product grades that are melt-source traceable, universally accepted by all major medical OEMs, and have ISO 13485:2016 approval. UPM's custom supply chain management and global access allows customers to get the bar products they need for their medical applications, from implant grades to instrumentation. Learn more about our bar products used in the medical industry by clicking [here](#).

Titanium

United Performance Metals offers [CP Grade 2](#), [Ti-6AL-4V](#), and [Ti-6AL-4V ELI](#) in bar form for the medical industry. These grades are mainly used for medical implants and medical devices. Titanium's high corrosion resistance, exceptional biocompatibility, and strength-to-weight ratio make it a top choice for medical applications.

Stainless Steel

Stainless grade [316LS/316LVM](#) is primarily used for medical implants, including fracture fixation devices, bone plates, and screws. United Performance Metals also stocks stainless steel grades [Custom 455](#)®, [Custom 465](#)®, [17-4 PH](#), [17-4 PH Heat Treated](#), [17-4 PH Precision Ground](#), [316/316L](#), and [410](#) for medical instruments.

Cobalt Chrome Moly

UPM stocks [Cobalt Chrome Moly](#), often referred to as CCM or Co-Cr-Mo, in bar sizes 0.250" - 1.250". The chemical composition of this material and its high amounts of molybdenum improves its strength and heat resistance, while its chromium provides oxidation and corrosion resistance, making this material highly biocompatible. Some of the most common CCM applications include knee, hip, and shoulder replacements, spinal rods, and disc replacements.



Did You Know?

United Performance Metals is dedicated to providing the top support for our customers, with global access and quick turnaround times. To meet the evolving needs of the medical industry, UPM is now stocking titanium at our west coast locations! This revolutionary move ensures faster delivery, lower freight costs, supply chain reliability, and dedicated support for the region's growing medical ecosystem. Get immediate access to the titanium bar you need when you work with United Performance Metals. Get a quote today by contacting sales@upmet.com.