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2024 Aerospace manufacturing attractiveness rankings

A geographic assessment for aerospace and defense manufacturing investments

pwc

PwC's tenth aerospace manufacturing attractiveness rankings offers a guide to — and rankings of — promising geographic locales for aerospace and defense (A&D) development. Our attractiveness index examines relative strengths across a wide array of selected key variables for locations globally and within the United States. With this edition, we move to a biennial basis for this report, which we believe enables us to better capture emerging and evolving trends across the aviation ecosystem. We hope that this report will continue to provide data that can inform investors and manufacturers in both the civil and commercial, as well as defense spheres, as they seek locations that support their strategic vision.

Overview

In a sector defined by rapid growth and intricate global dynamics, identifying the most attractive locations for aerospace and defense manufacturing and investment is increasingly essential. Our location attractiveness rankings offer data-driven insights to help businesses identify regions that align with their strategic objectives and operational requirements. To provide essential context for our rankings in this edition, let's begin by looking at trends shaping the A&D industry.

The overwhelmingly critical factor in A&D manufacturing today is surging demand. Across sectors of the industry — civil aviation, defense and space — in the US and globally, demand has reached record-setting levels. And the pace of demand increase appears to be accelerating.

Yet many companies are having trouble keeping pace. A&D manufacturing should confront the most complex value chain of any industry. Development, production and delivery lead times in A&D are typically the longest of any sector. Economies of scale can be hard to achieve. Reliance on sole-source suppliers is common, owing to small production volumes. Margins for some companies have eroded recently, even though margins normally improve with rising demand. Production, especially in civil aviation, remains significantly constrained by supply-network issues, both pandemic-related and emerging. A&D firms in multiple markets should address urgent pressures in the areas of cost, capacity, capability and compliance.

One critical challenge across aviation manufacturing today is the throttling of the global supply of titanium — an indispensable commodity in A&D — as a consequence of the war in Ukraine. Prior to the war, Russia was the world's primary source of titanium used in aircraft manufacturing. Although Russia mines a little more than a tenth of the global supply, sourcing most of its ore from Ukraine, Kazakhstan and Sri Lanka, the global supply chain is largely funneled through Russia for titanium in many forms essential to advanced manufacturing, including sponge and powder.[1] Airbus relies on Russia for about half of its titanium needs, Boeing about one-third.[2] Both companies depend primarily on Russia's vertically integrated VSMPO-AVISMA, the world's largest producer of titanium and titanium-alloy products — in effect, a chokepoint. The company has remained largely exempt from sanctions to date but is subject to geopolitical tensions and the disruptions of war. As of late 2024, Russian stocks were believed to be relatively low.[3] Europe's heavy dependency on Russian titanium — and on US titanium recycling — could be heading for an imminent crisis of supply disruption and spiraling cost. From the US point of view, titanium recycling is by contrast a bright spot, especially with the debut of IperionX's innovative plant in Halifax County, Virginia, which opened in early 2024 and is already ramping up output.[4] Intensive recycling of titanium and other high-tech metals could rapidly emerge as an attractive and competitive target for investment in the US, as the industry aims to compete directly with the Japanese companies long dominant in this area.

Another source of current uncertainty for A&D manufacturing is the changing US regulatory environment. By late February 2025, the Trump administration had imposed a 10% tariff on imports from China (on top of the 25% tariff on many categories of imports in place since 2019) and announced 25% tariffs on all imported steel and aluminum. Additionally, it is considering imposing broad tariffs on other trading counterparts, whether based on perceived imbalances in trade relationships or lopsided duty rates applied to American exports. These tariffs could specifically impact automobiles, pharmaceuticals and semiconductors, which the administration has specifically called out. While tariffs on imports from Canada and Mexico were delayed, the overall trade and tariffs situation remains fluid. The tariffs could steeply increase costs and snarl supply chains for many A&D manufacturers. The ultimate

outcome of these policy proposals is hard to predict, but they unquestionably should be considered when evaluating global A&D manufacturing investment locations. Companies will likely need some clarification before making investment decisions. However, as we detail in PwC's Aerospace and defense: US Deals 2025 outlook, smart companies now have an array of options in strategic planning to prepare for a shifting regulatory environment.

All of the countries and states we discuss below could be adversely affected by new tariffs. The US and Canadian aerospace supply chains, for example, are closely integrated. Canada ranked second, after France, among the top US export destinations for civil aircraft, engines and parts, receiving nearly $9 billion worth between May 2022 and April 2023, according to the US International Trade Administration (ITA).[5] Reciprocally, Canada exports most of its production in these same categories of goods to the US: an estimated just under 60% in 2022, for example.[6] Canada has signaled that it will not accept US tariffs passively; a tit-for-tat trade dispute between the two countries could severely impact A&D manufacturers on both sides of the border. The same is also true, if to a lesser extent, of Mexico, whose A&D sector is tightly integrated with those of both the US and Canada. As the ITA notes, the young but strong and growing Mexican aerospace industry is the US's seventh-largest export market.[7] US A&D manufacturers could also be hit hard by risks related to concentrations in relevant supply chains.[8] To cite just one revealing statistic, in 2022, more than 46% of machinery and mechanical appliances imported to the US came from China.[9]

The global air cargo industry correction toward pre-pandemic trendlines persists. Key cargo industry metrics — including revenues, yields, capacity increase and the pax belly hold versus dedicated freighter split — continued in 2023-24 to restore to levels slightly above 2019's pre-pandemic trajectory.[10] While industry revenues, projected at around $120 billion for 2024, are down more than 40% from their pandemic-driven peak in 2021 — and aggregate return above the cost of capital remains an elusive goal across the industry— long-term prospects for growth remain very positive.[11] Boeing forecasts 4% annual air cargo traffic growth that will more than double global air cargo traffic between 2023 and 2043, with sustained freighter production and conversion.[12] Airbus's predictions are similarly optimistic.[13] It appears likely that aspects of cargo aircraft manufacturing, conversion, and maintenance, repair and overhaul (MRO) could remain attractive investment prospects into the midcentury. Because the cargo fleet relies in many markets on small- to medium-size aircraft, the sector has potential as a focus for technological experimentation and innovation in greening the fleet as well.

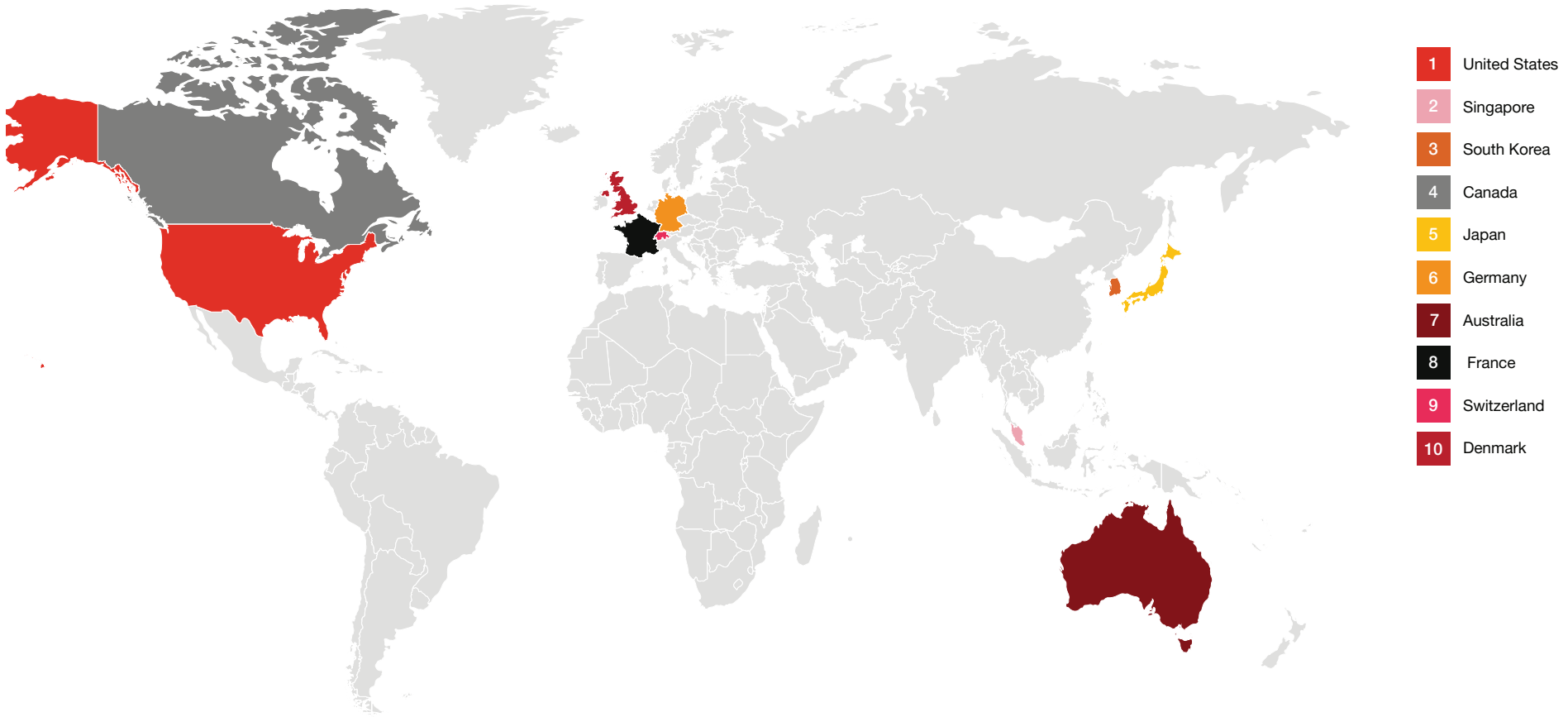
Find out more in these PwC reports:

- Global aerospace and defense: *Annual performance and outlook*
- Next in A&D: *Aerospace & defense industry trends*
- On the horizon: *Workforce trends facing the A&D industry*

Our rankings

The PwC country and state rankings are based on a weighted score of category and subcategory rankings. Each category and subcategory comprise multiple discrete metrics that are aggregated and weighted to arrive at the final rankings. The bulk of our data for this edition stems from calendar year 2023. The categories for our country ranking are Cost, Economy, Geopolitical Risk, Infrastructure, Labor, Industry and Tax Policy. The categories for our state ranking are identical, with one important exception: since we consider geopolitical risk to be the same for all states, we exclude it from the state ranking. While both country and state rankings use comparable metrics, there are slight differences in each measure's relevance to the ranking and the availability of quantitative information.

Country rankings



Top 10 country/region rankings for aerospace manufacturing attractiveness

Country	Final rank	Cost	Labor	Infrastructure	Industry	Geo political risk	Economy	Tax policy
United States	1	4	8	1	1	6	3	13
Singapore	2	15	15	12	4	3	5	2
South Korea	3	11	1	5	14	13	4	11
Canada	4	8	3	8	8	7	15	9
Japan	5	14	12	4	9	4	1	20
Germany	6	12	9	3	2	15	13	19
Australia	7	16	10	11	10	11	8	14
France	8	9	5	6	3	20	16	17
Switzerland	9	19	15	15	12	1	14	10
Denmark	10	3	22	18	23	5	10	3

Below is a closer look at the top-five countries in our ranking. Our top two countries this year, the US and Singapore, have ranked in the top three since our report's 2018 edition — an impressive level of consistent leadership. Our remaining top-five finishers, South Korea, Canada and Japan, have likewise proved to be industry leaders since these rankings launched in 2015.

The presence of four European countries (Germany, France, Switzerland and Denmark) rounding out our top 10 in part reflects NATO leaders' commitment to defense manufacturing investment in response to Russia's invasion of Ukraine.[14] (Switzerland's performance is even more impressive given that Swiss weapons exports dropped by 27% in 2023 because of the country's ban on re-export of its arms to Ukraine. The country's A&D manufacturers oppose this aspect of its neutrality policy, which could be up for revision — and soon.) Australia also owes its top-ten ranking this year largely to renewed federal investment in defense manufacturing. Meanwhile, its civil aviation sector continues to strengthen in both manufacturing and MRO services.

One major — and perhaps surprising — change is that the UK drops out of our top 10 for the first time ever this year, slipping to 14th place overall. The UK's fall from fourth to 20th place in our Economy metric and from 17th to 22nd in Cost mainly reflects overall weakness in the British national economy, due to persistent inflationary pressures and a web of post-Brexit supply-network, investment and export challenges. However, given the fundamental longstanding resilience and innovativeness of the UK's aviation sector, we anticipate that the next edition of these rankings will likely see the UK's return to our top 10.

United States

The US returns this year to the top spot in our ranking, up from second — having placed either first or second in every previous edition of this report — notching first place in both our Infrastructure and Industry metrics. Notably, the US this year also rises from 25th to 13th in Tax Policy, largely due to the implementation and effects of the 2018 federal tax reform, which reduced the effective tax rate on the country's largest and most profitable corporations, including A&D leaders, from an average of 22% to 12.8%.[15]

The US A&D sector remains a critical driver of economic growth, employment and innovation. In 2023, the US A&D industry climbed to 2.21 million employees, up 4.8% over 2022 (nearly three times the national average labor force growth rate), and saw more than $955 billion in sales, a 7.1% increase over the previous year.[16] Almost 60% of US A&D jobs (nearly 1.3 million employees) are connected directly to the A&D supply chain,[17] a fact that highlights the supply system's importance as a driver of value and growth but also its potential as a source of vulnerability. The ratio of employment in commercial aerospace to defense is nearly even, at 47% to 53%.[18] Foreign direct investment (FDI) in US aerospace reached $16.9 billion by end 2022 (the most recent year for which data are available), led by the UK, France, Canada and Germany.[19]

The US continued to lead globally in military spending in 2023, at $916 billion, equal to around two-thirds of NATO's total military spending.[20] Like most specialists, we estimate that between a quarter and a third of US military spending continues to be devoted to the A&D sector, depending on how the data are evaluated.

Perhaps the most significant development in US military aerospace is the launch in 2024 of a holistic program to modernize or replace virtually every component of the US strategic nuclear force, at a total cost of more than $1 trillion over three decades.[21] This initiative, whose planning began in 2010, will entail direct investment in at least 23 US states but could extend via subcontracting to all 50; in one sense, US nuclear modernization could constitute a national A&D workforce development program without precedent. A program so long, so expensive and so complex — and already well over budget and significantly delayed — is likely to evolve substantially over its life cycle. It is also certain to offer remarkable opportunities for investment and likely to have important spinoff effects in the development of technologies with applications in both civilian aviation and space.

Another key development with consequences not only for the US but also for other advanced economies is a shift in the global A&D semiconductor market, which is estimated to grow by $3.02 billion between 2024 and 2028, at a compound annual growth rate (CAGR) of 5.56%, with North America expected to account for 40% of global growth.[22] Taiwan Semiconductor Manufacturing secured approval in late 2024 to invest $4 billion in North America — a remarkable turnaround, given the island's long dominance in semiconductor manufacturing, and perhaps a harbinger of similar developments to come.[23]

Singapore

Singapore, which has never ranked below third place in our survey overall, this year earns top-five scores on our Tax Policy, Geopolitical, Industry and Economy metrics.

The city-state's aerospace industry has long excelled, accounting for more than 10% of the global MRO market and more than 25% in the Asia-Pacific region, where Singapore is the top aviation hub. Aviation manufacturing in Singapore focuses on designing and producing engine parts and other components for the civil sector; government policy for several years has prioritized incentivizing aviation manufacturing and R&D development. Singapore's highly collaborative business culture has long fostered relationships between foreign (especially US) exporters and local agents or distributors, which secure access across regional markets, and the city is the regional center for parts warehousing and distribution.[24]

While land is always at a premium in Singapore, growth prospects for aviation in Singapore have been strengthened in recent years by significant infrastructure investments. These include the Seletar Aerospace Park, a government-led project begun in 2006.[25] The first tenants moved into Seletar in 2010, and more than 70 local and international firms are at work there today while development continues. The expansion of Changi Airport, on track for completion in the mid-2030s, will increase both MRO and cargo-handling facilities in the Changi East Industrial Zone.[26]

South Korea

South Korea has never scored lower than 11th place in our PwC's ranking, and this year notches some of its highest scores in our metrics to date: fifth in Infrastructure, fourth in Economy and first in Labor. In recent years, the South Korean government has sought through an array of policy incentives to foster the development of domestic defense manufacturing for both national defense and for export, moving away from its traditional heavy reliance on US suppliers. The country's most successful recent exports include artillery, tanks, small naval vessels, surface-to-air missiles and light combat aircraft and even submarines. By 2024, South Korea had become the world's ninth-largest arms exporter, on the heels of a 74% increase in armaments export volume between 2018 and 2022.[27] In particular, South Korean firms are emerging as the arms suppliers of choice for countries across Southeast Asia.[28] Such leading companies as HD Hyundai Heavy Industries, Hanwha Corporation and Korea Aerospace Industries (KAI) have overcome supply-network disruptions in recent years and have earned a reputation for speed and reliability in fulfilling orders.

Civil aviation manufacturing in Korea is dominated by KAI, which manufactures and assembles components for Boeing and Airbus. KAI has also emerged as a significant producer of indigenous new tech, including unmanned aerial vehicles and both rotor- and fixed-wind small aircraft.[29] KAI and Korean Air together dominate the country's burgeoning MRO industry, which the government since 2021 has sought to grow at least sevenfold, with a target of $4.3 billion in value by 2030.[30] Although government initiatives play a dominant role in Korean civil aviation industrial policy, opportunities for foreign investment do exist in the Korean Aerospace Valley industrial cluster, comprising more than 100 small-to medium-scale companies serving both domestic and overseas markets.

Canada

Landing in our top four since the 2017 edition of these rankings, Canada drops just slightly, from third to fourth this year, but rises notably from 20th to eighth in Infrastructure and 19th to ninth in Tax Policy.

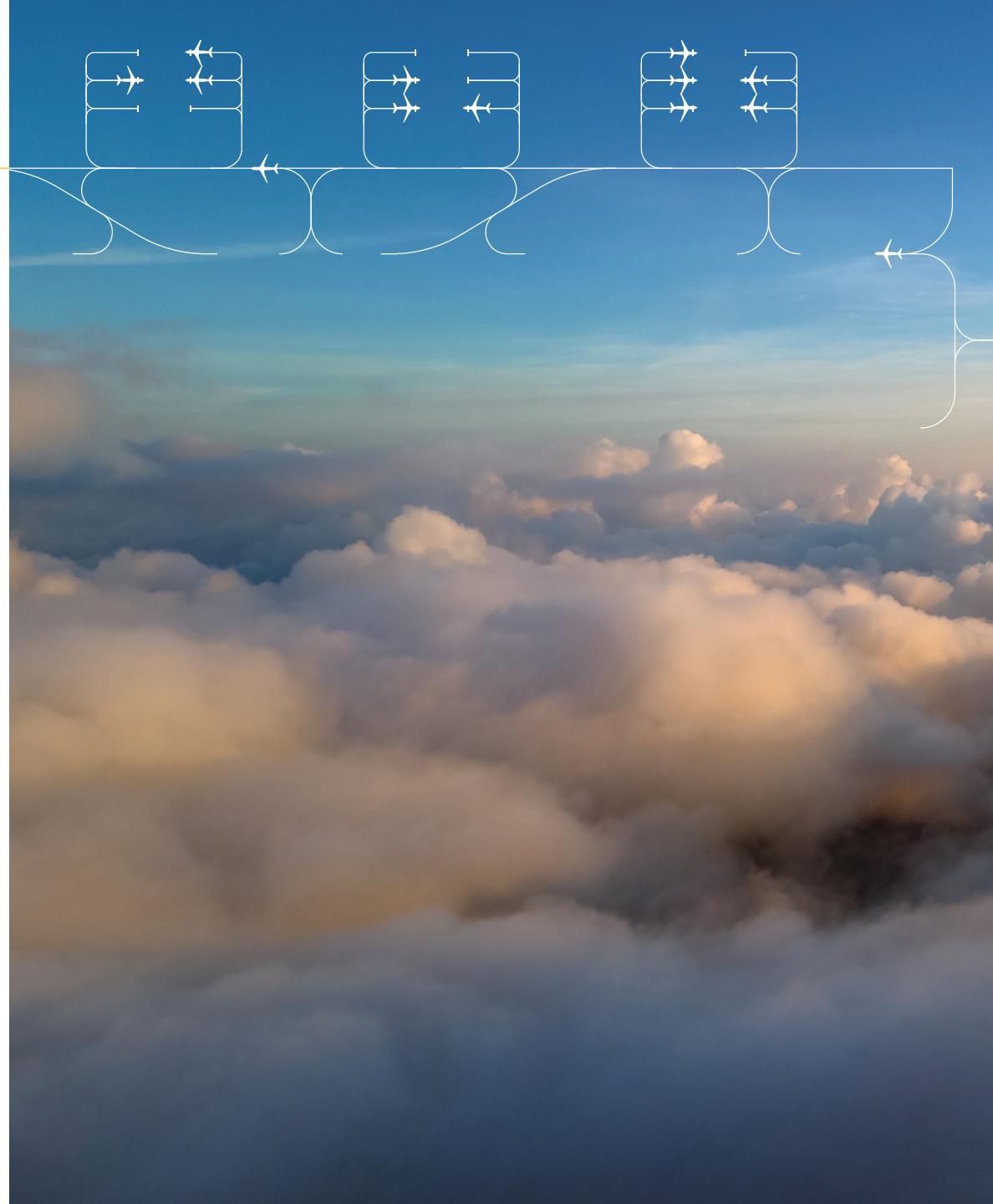
With 5% of worldwide sales in aerospace (the province of Québec alone has 3%), Canada is among the world's largest A&D markets.[31] However, because the Canadian aerospace industry remains dominated by manufacturing of civil aviation-related components for export, it tends to be sensitive to demand fluctuations, especially in North American and global pax and cargo volume. In 2022, more than 80% of Canadian A&D manufacturing revenues were export-oriented, of which more than 60% were supply-chain related.[32] Canada is the only country ranked by the ITA in the top five for the civil flight simulator, engine and aircraft subsegments in 2022.[33]

Like Singapore's, Canada's defense sector is small: only about 12% of the country's A&D is defense oriented.[34] For that reason, the increasing pressures Ottawa is now under to reach NATO members' stipulated target of military spending equal to 2% GDP and Canada's progress toward that goal are more likely to benefit foreign, especially US, defense manufacturers than domestic ones. Ottawa's December 2023 announcement of a CDN$10.4-billion purchase of at least 14 Boeing P-8A maritime surveillance aircraft — 737s packed with sensors, computers, analyst workstations and weapons — that will begin flying for the Royal Canadian Air Force no later than 2026 is a signal example.[35] The ultrafast-tracking of this purchase further suggests that Canada's notoriously lethargic military procurement procedures may be changing too — perhaps drastically. In a convergent key development, the North American allies announced in spring 2024 that the Pentagon would invest $15 million (US) to mine and process critical minerals (copper, gold, graphite and cobalt) in Québec and the Northwest Territories — the first such collaborative program since US federal dollars launched Québec's aluminum mining and refining industry in order to build Allied planes and tanks during World War II.[36]

Canada's aerospace sector remains intensely active in R&D, in part because of the Canadian government's exceptionally generous tax treatment of R&D capital and equipment investments. Montréal ranks behind only Seattle and Toulouse, France, among the world's aerospace hub cities and alone accounted for more than 75% of Canadian aerospace R&D in 2022. The MRO subsector, about half of which is in Western Canada, has grown rapidly over the last decade to account for 35% of national A&D activity in 2022.[37]

Multiple bilateral agreements favor US aerospace companies investing in Canada over other foreign markets, while working to ensure that US and Canadian firms compete on a level playing across the continent. Cross-border initiatives are also supported by close links among Canadian aviation firms and American regional aviation industry organizations, such as the Pacific Northwest Aerospace Alliance (PNAA), among many others. Major players in Canada include Airbus Canada, Avcorp Industries, Bell Helicopter Textron Canada, Boeing, Bombardier, CAE, CMC Electronics, De Havilland Canada, GE Aerospace, Goodrich, Héroux-Devtek, L3Harris, Safran, Lockheed Martin, Magellan Aerospace Corporation, Pratt & Whitney Canada, Raytheon, Rolls Royce, StandardAero and Thales. Given the country's vast landmass and thinly spread population, successful foreign investment typically relies on long-term relationships with local sales representation and bespoke distributorships.

Ottawa responded to the pandemic's disruption of Canada's aerospace industry with a wide array of subsidies and other financial support programs totaling nearly $5 billion (US) in 2022-23 (a few programs extend several years beyond 2023).[38] Canadian A&D sector data for 2022 reveals the first post-COVID increases in revenue, employment and GDP, all signs of rapid and robust recovery.[39] Building on Ottawa's 2021 initiative to comprehensively modernize the aging systems of the North American Aerospace Defense Command (NORAD) detailed in our 2022 edition of these rankings, in December 2024 the government announced a comprehensive new initiative aimed at protecting Canadian sovereignty in the Arctic, especially against threats of Russian and Chinese incursion.[40] The policy includes diplomatic, military and infrastructure development components, with potential consequences for A&D R&D in such areas as remote surveillance and monitoring of both airspace and naval territorial incursions as well as climate transition.



Japan

With its impressive climb in our ranking to fifth place in this edition — up from 18th in our last report (the country's lowest showing to date) — Japan returns this year to strength. Japan's top score on our metric for Economy and fourth place on both our Infrastructure and Geopolitical metrics clearly represent a return to form.

Never out of our top 10 from 2015 through 2020, Japan owes its strong showing largely to a transformative new national effort to revise its overall defense posture and expand its defense industry. A policy of national military buildup, launched in 2022 and without precedent in Japan since World War II, has fueled a rush in domestic defense contracting.[41] Underlying the new approach in part is a significant revision by the government of the principles regulating Japan's export of military equipment for the first time since World War II. Under the Official Security Assistance (OSA) program, launched in April 2023, Japan has committed to supplying defense materiel to multiple nations, including Indonesia and the Philippines.[42] (The Japanese government's evaluation of threats posed by North Korea and Russia is also a key factor influencing the policy.) By 2026, the program may extend to nine nations.[43] One important result is the government's permission to export next-generation combat aircraft that Japan is developing jointly with the UK and Italy under the Global Combat Air Programme, with potential markets in at least 15 countries.[44] Another result is Japan's commitment to help replenish US Patriot PAC-2 and PAC-3 missile stockpiles depleted by the war in Ukraine (though this initiative was slowed in 2024 by a Boeing production bottleneck).[45]

The Japanese Ministry of Defense has also raised the stipulated profit margin for its defense-connected domestic procurements up to 15% (from 8%) to encourage Japanese manufacturing.[46] In response, defense and other Japanese aerospace startups are already attracting US and other foreign venture capital, supported by expanded financing from the Development Bank of Japan's for defense- and space-related startups. Established players, including Mitsubishi Heavy Industries, Kawasaki Heavy Industries and IHI are forecasting steep revenue increases in coming years. Another strategic milestone: In December 2024, the US Space Force inaugurated a joint military space unit in Japan, in an effort to counter threats in both the civilian and military space sectors.[47]

Notable developments in other countries

Several significant developments in countries outside our top five this year involve enhanced prospects for defense manufacturing investment rooted in rising geopolitical tensions in Europe and the Asia Pacific region.

Australia

Australia has ranked in our top 10 since this report's 2017 edition and lands seventh this year, up from ninth. Australia's longstanding deep and broad cooperative relationship with the US advanced further with the 2021 announcement of the Australia-UK-US (AUKUS) agreement. AUKUS can be considered a trilateral effort to accelerate defense technology advancements, especially in nuclear-powered submarines and other undersea systems, as well as AI, quantum-computing-assisted navigation and cyberwarfare. The climate has likely never been more propitious for US defense companies to seek opportunities in the Australian market.[48]

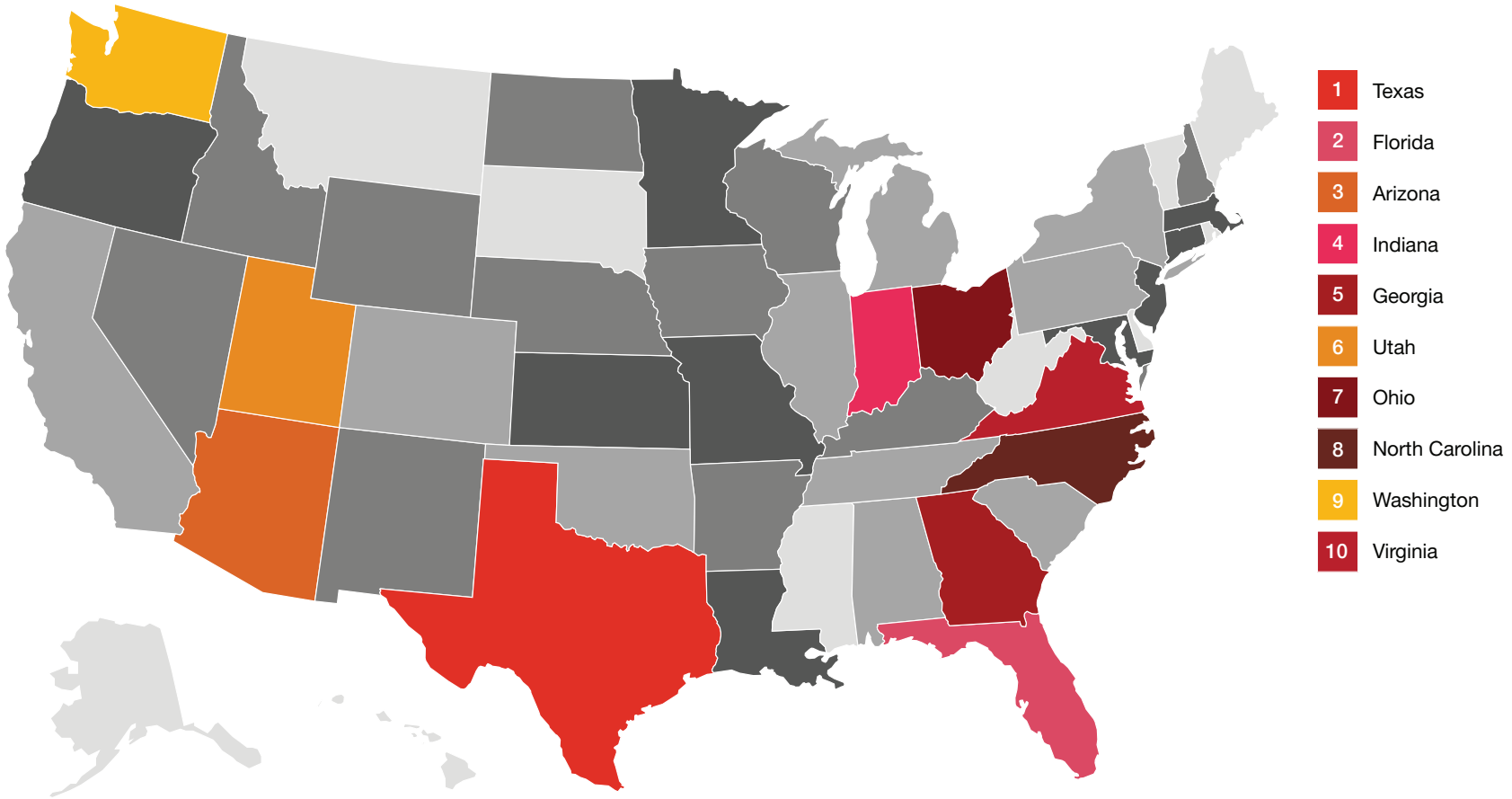
Ukraine

Ukraine has landed around 50th in our rankings since the 2017 edition, and did not make our top 25 this year. Nonetheless, the country's extraordinarily rapid development of its defense production industry[49] despite wartime challenges suggests that it could rapidly emerge as an attractive home for foreign investment in advanced weapons R&D and production. Some companies are not waiting: Germany's Rheinmetall is already building an ammunition factory in Ukraine, with production to start by mid-2026,[50] and a combat vehicles factory which started manufacturing in late 2024.[51] Ukraine has also announced multiple joint ventures (JVs) with Western weapons producers, while others have opened offices in the country; companies that have launched JVs in Ukraine include Flensburger Fahrzeugbau, UK-based BAE Systems, the Franco-German KDNS, Babcock, and MyDefence.[52] Another key sign of the increasing corporatization of Ukraine's defense R&D and manufacturing sector is the launch by the Joint-Stock Company Ukrainian Defense Industry (aka Ukroboronprom) of two research-and-production entities focusing on defense aircraft construction and repair as well as ammunition and specialized chemicals.[53]

Considerations for your business

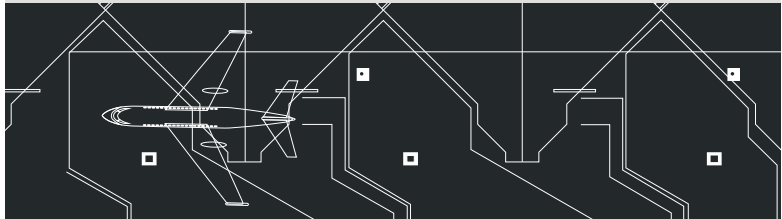
This year's country rankings reinforce key conclusions from the most recent prior edition of this report, PwC's 2022 Aerospace manufacturing attractiveness rankings. Globally, the investment landscape across civil and military aviation manufacturing is evolving rapidly and somewhat unpredictably, as countries and companies work to respond to economies and national strategic priorities drastically altered by ongoing wars in Europe and the Middle East and rising tensions across East Asia. In evaluating the A&D ecosystem in states and countries they choose to target for investment, today's investors may want to pay close attention to companies with a proven track record and clear planning for strategic cost management, especially while post-pandemic inflationary spikes or plateaus persist in several markets. Workforce and supply-chain transformation are unavoidable priorities for many companies now on the path to resilient sustainability. The rapidly deepening integration of the space sector into the global economy — especially the world's ever-increasing dependency on satellites — means that space manufacturing can no longer be considered separately from civil and military aviation. Our top-ranking countries are among those leading the way in fostering a business climate that supports such important changes.

State rankings



Our ranking's top five states this year have been perennial leaders since the edition of this report published in 2017. Indeed, as was true in our most recent prior rankings, released in 2022, this edition's top 10 states list merely reorders the previous report's top 10. Moreover, all but two of 2022's top 20 states reappear in this year's top 20 as well (with Illinois and New York in effect yielding to Kansas and Missouri).

One key takeaway from this year's states ranking is the resilience, stability and persistently strong underlying economic and physical infrastructure of US A&D manufacturing. Despite the challenges of the COVID-19 pandemic, including supply-chain problems and civil aviation demand fluctuations, as well as post-pandemic inflation shocks and a rapidly changing global geopolitical environment that is significantly altering military A&D, the strongest states continue to progress from strength to strength, and savvy investors are likely to find attractive prospects across the top 20 states in our ranking — and indeed, many others too.



Top 10 state rankings for aerospace manufacturing attractiveness

State	Final rank	Cost	Labor	Infrastructure	Industry	Economy	Tax policy
Texas	1	24	9	15	1	1	1
Florida	2	20	28	8	11	2	15
Arizona	3	26	11	7	2	17	10
Indiana	4	25	32	4	4	13	11
Georgia	5	31	18	5	6	9	25
Utah	6	1	10	8	30	21	23
Ohio	7	27	36	16	9	5	5
North Carolina	8	36	19	3	20	8	16
Washington	9	48	3	19	13	4	14
Virginia	10	17	6	18	5	24	26

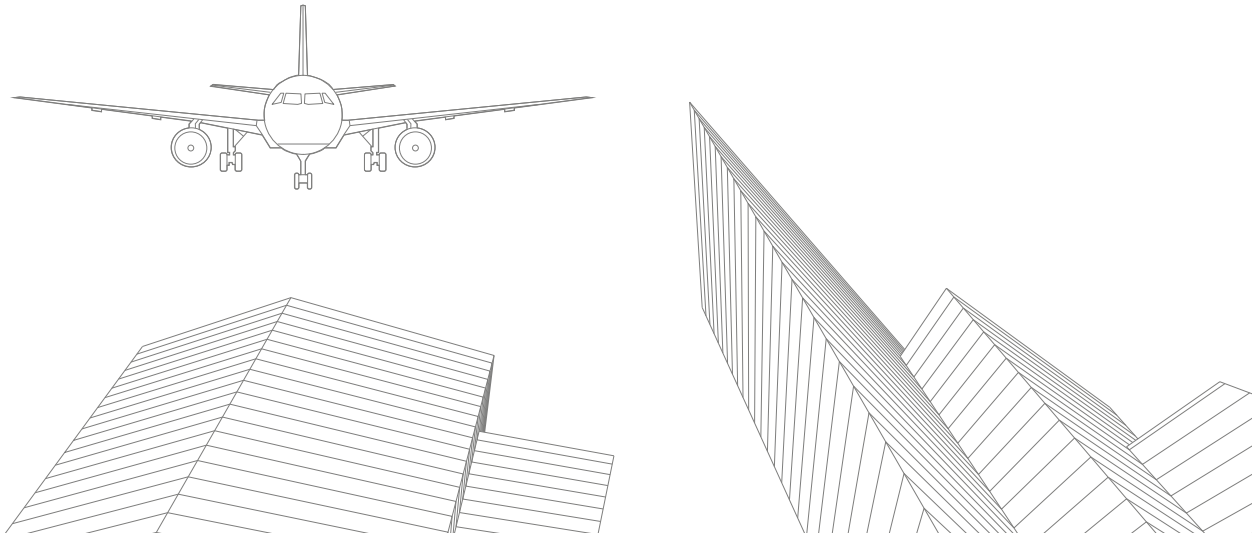
Below we take a brief, closer look at notable industry initiatives or other indicators of significant emerging and potential growth and investment opportunities among the five highest-ranked US states.

Texas

Despite continuing to score relatively low in Cost this year (up slightly, to 24th, from 28th in 2022), Texas leads all states, as it did in 2022, scoring first this year in our metrics for Industry, Economy and Tax policy. This impressive showing is no surprise: Texas has never placed below the top four in our survey since its inception. The Texas A&D industry directly employs more than 154,000 workers at more than 2,000 installations representing 16 of the world's top 19 aerospace manufacturers.[54] Texas ranks third in the nation in both aerospace product and parts manufacturing firms and exports (valued at $11.13 billion in 2023).[55] The state is home to 15 military bases that contributed $151.2 billion to the state's economy in 2023, including six active Air Force bases and NASA's Lyndon B. Johnson Space Center. The state also has two FAA-licensed spaceports, the Houston Spaceport and the Midland International Air and Space Port. SpaceX maintains commercial launch sites in Boca Chica and McGregor, and Blue Origin launches space tourism flights from Van Horn.[56] Texas-based firms are also pioneering leaders in urban air mobility R&D. The state's colleges and universities invest heavily in aviation-related R&D and set a nationwide example in sector workforce development. In March 2024, the state launched the Texas Space Commission to support aspects of commercial and military space R&D.[57]

Florida

Florida, a perennial leader in US A&D, rises to second place this year, from eighth in our last edition, with improvements in Cost, from 37th to 20th place, and in Economy, from fifth to second. Florida ranks second among US states for aerospace products and parts manufacturing; major defense contractors, both American and foreign, have a presence in the state.[58] Key recent developments include Ontic's new MRO facility in Miramar[59] and AAR Corp.'s new MRO facility in Miami;[60] the selection of Patrick Space Force Base as the permanent headquarters for the US Space Force Training and Readiness Command (STARCOM) in 2023;[61] and the French next-gen aircraft company AURA AERO's new manufacturing and assembly plant at Daytona Beach International Airport.[62]



Arizona

Arizona lands in third place for 2024, rising from sixth in our last report, with significant improvement in Infrastructure (up to seventh place, from 13th), Industry (up to second, from fifth), and Tax Policy (up to tenth, from 15th). The state, which ranks among the top five US states in A&D employment, remains at the forefront of technological innovation in many areas; the new Future48 Workforce Accelerator program, announced by the governor in early 2025, could enhance the state's competitiveness in the sector still further.[63] Important recent developments include Setna iO's expansion of its Tempe MRO facility[64] and Ascent Aviation Services' breaking ground on a new site in Marana for passenger-to-freighter conversion and heavy maintenance.[65]

Indiana

Indiana inches up to fourth from fifth place this year, with impressive advances in Infrastructure (from 16th to fourth) and Industry (from eighth to fourth) — and despite slipping in Economy from second to 13th place. Despite being home to just over 1% of the US A&D workforce,[66] Indiana has seen more than $1 billion in aerospace investment since 2013.[67] The state far outranks the national average in the proportion of engineers in its workforce and has seen nearly a 30% average annual increase in aviation- and space-related exports since 2002.[68] Important news in 2023 included three federal tech-hub designations, in microelectronics, hydrogen energy and biotechnology.[69] In 2024, pursuing a multifaceted state policy of workforce development that has intensified impressively as part of Indiana's post-pandemic recovery efforts, the state announced a significant investment in Indiana University's microelectronics research and development capacity, which is expected to support expansion of the microelectronics sector not only in-state but also regionally.[70]

Georgia

Georgia slides slightly, from second to fifth place this year, with a dip in metrics for Cost (from 25th to 31st) and Labor (13th to 18th). Yet it should be noted that Georgia placed in the top four in our ranking from 2016 through 2022 and reached the top spot twice. The state remains exceptionally attractive for investment across multiple aviation subsectors. Aerospace products are the state's top export ($11.1 billion in 2023) and its second-biggest manufacturing industry.[71] The state also boasts a strong aerospace education pipeline led by Georgia Tech and reaching across several universities offering degrees in aerospace engineering and to five technical colleges with aviation programs, as well as a dozen high schools that offer training in the field. Georgia's investments in infrastructure include a recently expanded $1.5-billion budget for airport improvements.[72] The development of Georgia's Innovation Isles Aerospace Park[73] and Eastman Aerospace Park[74] provides attractive locations for aerospace manufacturing and R&D. The state has been particularly successful in recent years in attracting leaders in unmanned aircraft systems and urban air mobility innovation.

Notable developments in other states

The two states new to our top 20 since our last ranking both boast more than a century of achievements in aviation manufacturing. Both are also exceptionally rich in undergraduate and graduate programs in STEM fields directly related to A&D. **Kansas** rises to 15th from 21st in our ranking this year, with improvements in all metrics, and with especially impressive results in Cost (from 24th to tenth), Infrastructure (25th to 14th) and Tax Policy (28th to 20th). Kansas's A&D sector is strikingly export-driven: almost 20% of the state's total exports are A&D products, worth $2.3 billion.[75] As of end 2024, the state has attracted more than $20 billion in committed private-sector investment since 2019 — a major milestone.[76] **Missouri** moves up just slightly this year, from 22nd to 20th, largely on the basis of improvement in Industry, from 17th to seventh. Perhaps the most important development in the state is the $1.75 billion expansion project[77] now underway of the western campus of the National Geospatial-Intelligence Agency (NGA),[78] expected to open this year.

Considerations for your business

The fluctuating international picture contrasts starkly with our data on US domestic A&D manufacturing location attractiveness, which reveals remarkably persistent stability. The need for A&D workforce development — growth, diversification, education and (re-)training — and the efforts underway to address that need emerge strongly as critical concerns in many states. Many companies feel a pressing need to foster intergenerational knowledge transfer as they face a retirement wave. The urgent need to identify and foster US engineering talent in particular, starting as early as high school, is top of mind for many leaders across the civil, military and space sectors. States with well-developed procurement relationships with the Pentagon, especially states that have invested in R&D capability enhancement recently, could expect strong growth in coming years. Competition among our top-ranking states to attract space-sector investment and green-aviation startups reveals a growing emphasis on public-private collaborations and the development of new technologies that cross the boundaries among the civil, defense and space areas. And the urgent priority of decarbonizing A&D manufacturing and flight itself confirms that, while it is hard to predict which technologies will likely take the lead, the pace of change could accelerate.

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