25 YEARS

INTERNATIONAL FIGHTER

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FIGHTER AIRCRAFT: 2025 GLOBAL MARKET REPORT

Defence iQ

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OVERALL TRENDS

The fighter aircraft market in the selected countries, is expected to cumulatively value almost US$298.8 billion over the period 2025-2030. The U.S. is leading the spending at US$105 billion, accounting for 35% of the global market. Other significant contributors include Indonesia (US$22.5 billion), UAE (US$14.9 billion), Germany (US$14.9 billion), Japan (US$14.4 billion), and Italy (US$11.5 billion).

While fifth-generation fighters dominate current procurement efforts, the transition to sixth-generation capabilities is well underway, driven by programmes such as the recently awarded U.S. F-47 (formerly NGAD), GCAP (a joint programme among the UK, Japan, and Italy), and FCAS (a joint programme among France, Germany, and Spain). However, rising costs, political uncertainty, and industrial volatility pose challenges to this evolution.

Fifth-generation fighters remain central to global air forces, comprising 53% of air platform budgets. Approximately 1,500 new aircraft are expected to be delivered by 2030, with Lockheed Martin's F-35 leading the market. However, air forces are increasingly seeking capabilities beyond the F-35, such as multirole functionality, crewed-uncrewed teaming (MUM-T), and superior networking.

The period also marks the intensification of sixth-generation fighter development programs. The U.S. is advancing its F-47 programme to replace the F-22 Raptor, incorporating stealth, optionally crewed capabilities, AI-enabled drones, and adaptive propulsion systems. Concurrently, the U.S. Navy's F/A-XX is under development to succeed the Super Hornet, though funding constraints have delayed progress. Europe's efforts are split between two major programs: FCAS, led by France, Germany, and Spain, and GCAP, a trilateral initiative between the UK, Japan, and Italy. Both aim to deliver operational sixth-generation fighters by 2035.

Technological innovation underpins these programs, with advancements in stealth shaping, signature reduction, and internal weapons bays becoming standard. AI is transforming operations, enabling autonomous wingmen and enhanced threat detection. Modular open systems architecture (MOSA) enables plug-and-play upgrades, while adaptive engines promise enhanced range and performance. Hypersonic weapons and directed energy systems remain long-term goals.

Despite these advancements, the fighter market faces significant challenges. Budget constraints, such as those imposed by the U.S. Fiscal Responsibility Act (FRA) of 2023, have led to cuts in F-35 orders and slowed the development of sixth-generation programs. In Europe, political disputes over workshare threaten FCAS, with France's demand for 80% of industrial participation causing resistance from Germany and Spain. Industrial readiness is another concern, as seen in the UK's temporary halt of Eurofighter Typhoon production due to order shortages.

Regional dynamics highlight diverse market trends. North America leads with US$111.5 billion in projected spending, driven by the U.S.'s ongoing F-35 procurement and sixth-generation initiatives. Canada is acquiring 88 F-35s under its Future Fighter Capability Project. The Asia-Pacific market, worth US$56 billion, is led by Indonesia, Japan, and South Korea. Indonesia plans to procure 48 Turkish KAAN fighters, 42 Rafales, and participate in the KF-21 program. Japan is expanding its F-35 fleet and advancing the GCAP Tempest program, while South Korea targets 120 KF-21 fighters by 2032. India is progressing with its AMCA and Tejas Mk2 programmes while exploring MUM-T capabilities.

In Europe, nations such as France, Germany, and Italy continue to invest in both legacy and next-generation platforms. The Rafale and Eurofighter Typhoon remain in demand, while FCAS and GCAP will define the region's future capabilities. Turkey's potential return to the F-35 program, alongside its KAAN fighter development, highlights its growing role in the market.

The Middle East, valued at US$26.7 billion, sees strong demand from the UAE, Saudi Arabia, and Israel. The UAE has signed a US$19 billion deal for Rafale F4 jets and is exploring the procurement of KF-21. Israel is expanding its F-35I Adir fleet to 75 aircraft and acquiring F-15IA fighters. Saudi Arabia is pursuing Typhoons and KAAN fighters under Vision 2030. Latin America, with a smaller market of US$6.3 billion, focuses on modernisation in Brazil, Colombia, and Argentina, with Brazil expanding its locally assembled Gripen fleet.

Key platforms include the globally dominant F-35, the export-strong Rafale, the Eurofighter Typhoon, the affordable Gripen, and emerging options like the KF-21 and Turkey's KAAN fighter. The F-35 remains the most widely adopted fifth-generation jet, while sixth-generation programmes are expected to enter low-rate production by the late 2020s.

The fighter aircraft market will hinge on balancing capability, affordability, and industrial strategy. Managing costs, fostering multinational collaboration, and achieving timely integration of advanced technologies will be critical. The market is expected to increase from US$42.4 billion in 2025 to US$57.5 billion in 2030, registering a CAGR of 6.3%.

FIGHTER AIRCRAFT MARKETS, SELECTED COUNTRIES, 2025-2030, US$ MILLIONS

Table 1: Fighter Aircraft Markets, Selected Countries, 2025-2030, US$ Millions

Fighter Aircraft	2025	2026	2027	2028	2029	2030	Total
Sixth Generation	4,424.20	5,188.30	5,666.90	6,176.40	7,798.10	7,775.00	37,028.90
Fifth Generation	22,065.50	21,697.50	25,628.40	27,349.10	30,102.20	30,644.20	157,486.90
Fourth /4.5th Generation	15,089.30	14,197.50	15,331.20	15,575.60	15,450.60	15,575.60	91,219.70
Loyal Wingman	856.7	306.4	1,849.60	3,266.30	3,351.30	3,475.00	13,105.30
Total	**42,435.70**	**41,389.60**	**48,476.20**	**52,367.40**	**56,702.20**	**57,469.80**	**298,840.80**

Figure 1: Fighter Aircraft Markets, Selected Countries, 2025-2030, US$ Millions

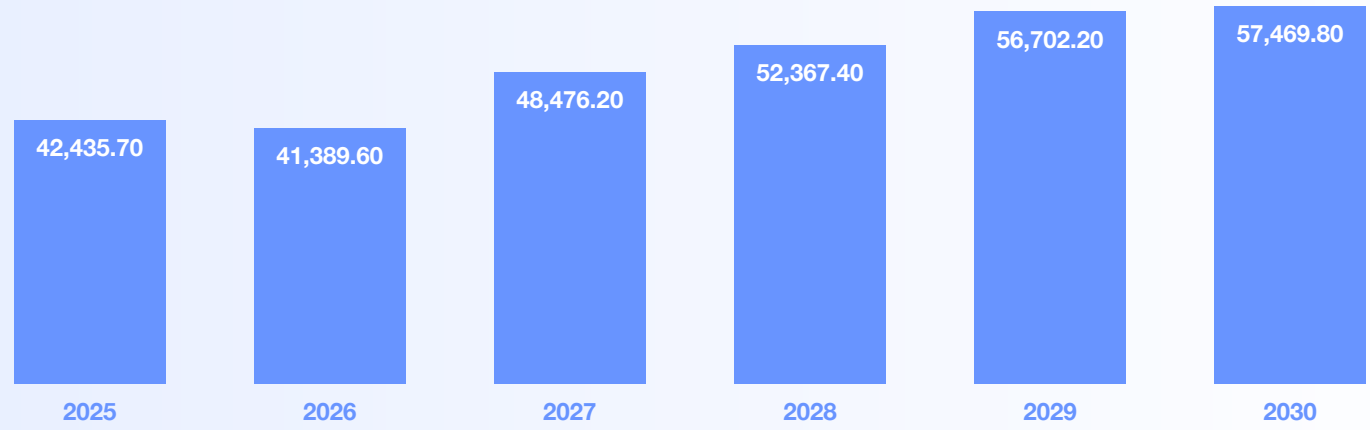
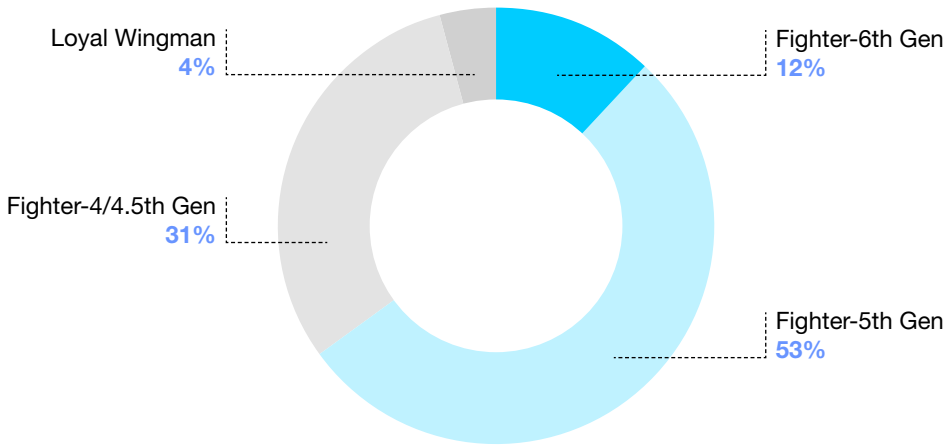


Figure 2: Fighter Aircraft by Type in Selected Countries in %, 2025-2030



EMERGING TECHNOLOGIES

Over the past decade, the fighter aircraft market has undergone a significant transition, shifting from traditional fourth-generation designs to the cutting edge of fifth - and sixth-generation systems. This shift reflects broader technological advancements and changing strategic doctrines, driven by rising geopolitical tensions, asymmetric threats, and the growing need for agile, resilient airpower.

TRANSITIONING ACROSS GENERATIONS

For decades, fourth- and 4.5-generation fighters, such as the F-16, Rafale, and Eurofighter Typhoon, have served as the backbone of many air forces. These aircraft introduced advanced avionics and multi-role adaptability, yet their survivability in contested airspaces has diminished over time. This paved the way for fifth-generation platforms such as the F-35, J-20, and Su-57, which feature low-observable stealth, internal weapon bays, and integrated sensor fusion. These advanced fighters remain the primary choice for global procurement, excelling across a diverse range of mission profiles. Now, the focus is shifting toward sixth-generation fighter programs, with nations aiming to redefine air combat capabilities. In the U.S., the Air Force's F-47, formerly known as the Next Generation Air Dominance (NGAD) program, is spearheading this evolution. The F-47 envisions a "family of systems" that includes a crewed Penetrating Counter Air (PCA) fighter supported by a fleet of Collaborative Combat Aircraft (CCA), or "loyal wingmen." Meanwhile, the U.S. Navy is pursuing its F/A-XX program, a carrier-capable sixth-generation platform, though it faces challenges in funding and prioritisation.

Europe is advancing its own sixth-generation initiatives through two key programs. The Future Combat Air System (FCAS), a collaboration among France, Germany, and Spain, aims to integrate crewed fighters with autonomous systems into a networked combat ecosystem. Similarly, the Global Combat Air Programme (GCAP), developed jointly by the UK, Japan, and Italy, envisions a similar fusion of technologies. Both programmes are expected to deliver operational platforms by the mid-2030s.

China and Russia are also making strides in the sixth-generation race. In December 2024, China unveiled prototypes for two new fighter models, the Chengdu J-36 and the Shenyang J-XX (possibly designated J-50), although their official names remain unconfirmed. Russia, on the other hand, is developing the MiG-41, which is expected to be its first sixth-generation aircraft. Reports suggest the MiG-41 could make its maiden flight by 2028, signalling Russia's determination to stay competitive.

Table 2: Fighter Aircraft: Transition Across Generations

Parameters	Fourth- and 4.5-generation	Fifth Generation	Sixth Generation
Aircraft (Country of Origin)	• F-16 U.S.), F-15EX (U.S.), F/A-18E/F (U.S.) • Rafale (France) • Eurofighter Typhoon (Eurofighter Jagdflugzeug GmbH) • Gripen NG (Sweden) • KF-21 (South Korea) • Mirage 2000 (France)	• F-35 (U.S.) • J-20 (China) • Su-57 (Russia)	• F-47 (U.S.) • F/A-XX (U.S.) • FCAS (France, Germany, and Spain) • GCAP (UK, Japan, and Italy) • J-XX/28/36/50 (China) • Upgraded SU-57 and MiG-41 (Russia)
Loyal Wingman (under development)	-	CCA (U.S.)	• CCA (U.S.) • Remote Carrier (FCAS)

UNCREWED SYSTEMS AND MANNED-UNMANNED TEAMING

A key innovation of this new generation is the integration of Collaborative Combat Aircraft (CCA), uncrewed, jet-powered drones designed to operate alongside piloted fighters. The U.S. Air Force plans to acquire over 1,000 CCAs to complement its existing F-35s and upcoming F-47 fighters. These drones, including prototypes such as Anduril's YFQ-44a and General Atomics' YFQ-42a, can perform ISR, strike, and electronic warfare missions more cost-effectively, at approximately US$25-30 million each, compared to the US$200-300 million cost of piloted fighters. Similarly, the UK's GCAP and Europe's FCAS programmes also envision integrating swarming wingman drones into future operations.

Strategic deployment of CCAs also depends on advanced command and control (C2) architectures. Pilots might control loyal wingmen directly through cockpit tablets, or assets could be managed by centralised command centres, creating trade-offs between autonomy and mission responsiveness. The U.S. Defence Advanced Research Projects Agency (DARPA) also explores AI-driven dogfighting in the ACE programme, having achieved an AI plugin for an F-16 that successfully outperformed a human pilot in a simulated engagement.

ARTIFICIAL INTELLIGENCE AND AUTONOMY

AI plays a crucial role in all these advancements, from autonomous flight and sensor fusion to mission planning, forming the backbone of sixth-generation fighter capabilities. The Pentagon's Joint All-Domain Command and Control (JADC2) programme has invested in multi-domain data networking, utilising AI to support missions, logistics, and command systems across air, land, sea, space, and cyber sectors. Recently, the Air Force issued a doctrine that emphasises AI in weapons systems, focusing on applications like CCAs, predictive maintenance, and tactical systems, while also addressing concerns about data bias, cybersecurity, and workforce skills. Additionally, reinforcement learning and hierarchical multi-agent frameworks are being tested to enable AI agents to plan and execute air combat manoeuvres independently.

INTEROPERABILITY AND NETWORKED SYSTEMS

The modern fighter is not an isolated platform but a node within a broader "system of systems" architecture that must integrate crewed jets, drones, satellites, ground sensors, and naval assets. Programmes such as JADC2, the European NACAPR effort, and the Five Eyes interoperability councils are developing architecture standards and conducting live training to facilitate seamless, multi-domain operations. This systems-based connectivity demands secure, low-latency AI-enhanced tactical communications, a field that has been heavily researched in both classified and open sources.

CHALLENGES

Budget pressures and supply chain issues limit the global fighter aircraft sector. In the U.S., the Fiscal Responsibility Act of 2023 and trade-war related tariffs restrict funding for the F-35, sixth-generation programmes like the F-47 (NGAD), and the Navy's F/A-XX. These limits may delay development and reduce procurements. Contractors report strained margins and rising costs of materials, particularly rare-earth elements, which could erode profits. In Europe, the halt in Eurofighter production at BAE's Warton plant highlights the fragility of aircraft manufacturing capacity and raises concerns about the loss of engineering skills.

Supply chain constraints are another key issue for defence contractors and militaries to address in order to pursue their procurement objectives. The global reliance on Chinese rare-earth minerals, such as dysprosium and samarium, poses a threat to the continuity of systems like F-35 engines, actuators, and sensors. Industries are taking steps, including diversifying suppliers, reshoring capabilities, and enhancing stockpiling, but recovery is gradual.

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At the same time, defence ministries are grappling with integrating new technologies into legacy platforms. Upgrades to the F-35, Rafale, and Eurofighter involve complex avionics, AI-driven systems, and digital architecture integrations. These efforts often clash with dated hardware infrastructure. For example, India's integration of its indigenous Uttam AESA radar onto the Rafale M was scrapped due to cost and time constraints, forcing reliance on baseline systems. Similarly, delays in HAL Tejas Mk1A production were caused by compatibility issues with engine components sourced globally.

On the political front, export controls and geopolitical tensions are reshaping the defence aircraft industry. China's latest export bans affect Taiwan's defence sector, showing how tensions disrupt supply lines. U.S. controls, including ITAR and semiconductor restrictions, influence procurement and alliances. Beijing's control of rare earth exports gives it leverage, leading the U.S. to accelerate domestic mining efforts in places like Ukraine and Greenland.

European sixth-generation projects face their own internal strains. In FCAS, France's demand for an 80% share in industrial work threatens to fracture its partnership with Germany and Spain. Across the Atlantic, the U.S. imposition of tariffs and trade restrictions has fuelled some level of uncertainty among NATO allies, prompting a reassessment of programmes like the F-35 and limiting the flow of parts and interoperability.

These converging pressures, including tight budgets, fragile supply chains, technology integration challenges, and export politics, create a volatile mix. Aircraft producers and defence planners have to navigate this terrain by forging resilient procurement strategies, investing in sovereign industrial capabilities, and carefully balancing domestic priorities with international collaboration.

ASIA PACIFIC

The Asia Pacific fighter aircraft market (selected countries) is expected to reach a total value of around US$58.5 billion from 2025 to 2030. The growth is primarily driven by increasing defence budgets, shifting threat perceptions, and a shift towards local development. Indonesia, Japan, and South Korea are the key contributors in the region, collectively making up over 80% of the regional fighter aircraft market.

Indonesia leads regional expenditures with approximately US$22.5 billion, fuelled by major procurements such as the purchase of 48 Turkish KAAN fifth-generation stealth fighters for US$10 billion, the acquisition of 42 Rafale jets from France for over US$8 billion, and collaboration on South Korea's KF-21 Boramae project to develop a 4.5-generation multirole fighter.

Japan is notable for its strong procurement capabilities and domestic innovation. Its F-35 fleet, expected to reach 147 aircraft, will be among the largest outside the U.S., with an investment of US$33 billion.

South Korea continues to develop its indigenous KF-21 Boramae program, aiming to produce 120 jets by 2032 across two production batches. Meanwhile, South Korea has also acquired 60 F-35As, including 20 of the latest Block 4 variants. Additionally, the country is developing stealth drones and loyal wingman systems, emphasising its strategic focus on future defence technologies.

Beyond the top three, Australia has completed its procurement of 72 F-35A fighters and is modernising its Super Hornet and Growler fleets. It is also progressing its MQ-28A Ghost Bat loyal wingman project and exploring future sixth-generation aircraft options, such as the U.S. F-47, as well as those of the UK, Japan, and Italy's GCAP. Meanwhile, Singapore is enhancing its operational flexibility with a mixed fleet of F-35Bs and F-35As, with a focus on resilience within a land-constrained setting.

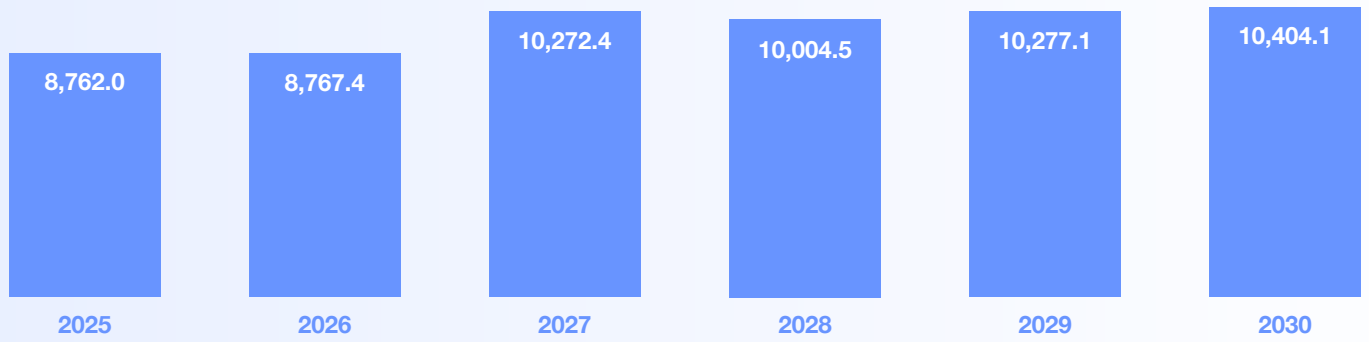
The market is expected to increase from US$8.9 billion in 2025 to US$10.4 billion in 2030, registering a CAGR of 3.5%.

FIGHTER AIRCRAFT MARKETS IN ASIA PACIFIC 2025-2030, US$ MILLIONS

Table 3: Fighter Aircraft Markets in Asia Pacific (Selected Countries) 2025-2030, US$ Millions

Fighter Aircraft	2025	2026	2027	2028	2029	2030	Total
Sixth Generation	425.0	425.0	425.0	425.0	425.0	425.0	2,550.0
Fifth Generation	3,850.0	3,599.4	3,899.4	3,999.5	4,832.1	4,579.1	24,759.6
Fourth /4.5th Generation	4,392.0	4,623.0	5,828.0	5,435.0	4,850.0	5,200.0	30,328.0
Loyal Wingman	95.0	120.0	120.0	145.0	170.0	200.0	850.0
Total	**8,762.0**	**8,767.4**	**10,272.4**	**10,004.5**	**10,277.1**	**10,404.1**	**58,487.6**

Figure 3: Fighter Aircraft Markets, Asia Pacific (Selected Countries), 2025-2030, US$ Millions



AUSTRALIA

FIFTH GENERATION: F-35A LIGHTNING II

Australia joined the multinational Joint Strike Fighter (JSF) programme in 2002 to purchase 72 F-35A aircraft for the Royal Australian Air Force (RAAF), as part of the US$16 billion AIR 6000 Phase 2A/2B initiative. The first two units were delivered at RAAF Base Williamtown in December 2018. According to the original schedule, all the jets were expected to be delivered by 2023. However, the deliveries were delayed by a year, and the RAAF completed its acquisition of 72 F-35s after the last three aircraft arrived in the country in December 2024.

The F-35 programme has attracted considerable attention, both positive and negative, due to issues related to costs, capabilities, and safety. For instance, from 2015 to 2021, the Australian Department of Defence spent up to US$485 million merely to maintain its fleet of 48 aircraft. This has resulted in the 2024 National Defence Strategy cancelling the planned fourth squadron of 28 F-35 jets. However, in March 2025, Opposition leader Peter Dutton promised AU$3 billion to revive this order and deliver 28 additional F-35as within five years if the Coalition gains power. Nonetheless, considering the victory of the Australian Labour government, the procurement deal is unlikely to occur before 2028.

FOURTH/4.5TH GENERATION: SUPER HORNET & GROWLER UPGRADES

Australia is currently upgrading its F/A-18F Super Hornet and EA-18G Growler fleets. In April 2025, Australia requested a sustainment and support package from the U.S. to extend the operational life of these aircraft into the 2030s.

In June 2025, the U.S. State Department approved the sale of 60 Global Lightning Joint Tactical Terminal Transceivers (JTT-X) and 24 Next Generation Electronic Attack Units (NGEAU). These systems will be installed on the RAAF's EA-18G Growler electronic attack aircraft and F/A-18F Super Hornet fighter jets.

The upgrades will enhance threat detection and electronic countermeasure capabilities. The package also includes maintenance, software, spare parts, and support equipment. Integration and rollout are planned between 2025 and 2028. This US$2 billion programme is expected to ensure improved capabilities and interoperability with U.S. forces.

MQ 28A "GHOST BAT" LOYAL WINGMAN

The Loyal Wingman programme began in 2019 as a partnership between the Royal Australian Air Force (RAAF) and Boeing Australia. Its goal is to develop an uncrewed aircraft system to operate alongside crewed combat aircraft, such as the F-35 and F/A-18 Super Hornet.

The aircraft, officially named the MQ-28A Ghost Bat, is Boeing's largest uncrewed programme outside the U.S. Boeing Australia, the lead contractor, unveiled the Loyal Wingman in May 2020. The Australian government initially invested US$28 million in the project, followed by an additional US$115 million in March 2021 to produce three more aircraft, increasing production capability to six units. In February 2024, Australia committed another US$400 million to the programme. By May 2025, the government had ordered 13 MQ-28A UAVs, including 10 Block-1 and 3 Block-2 models.

The first prototype flew in February 2021, and by March 2025, the MQ-28 had completed its 100th test flight. At the Avalon Airshow in March 2025, Boeing announced plans to test air-to-air missile launches from the MQ-28 by late 2025 or early 2026.

Australia aims to have the Loyal Wingman operational by the end of 2025. The programme is expected to cost US$450 million between 2025 and 2030.

AUSTRALIA'S SIXTH-GENERATION AIRCRAFT OPTIONS

Australia, like other advanced militaries, is exploring sixth-generation aircraft to replace its ageing fleet, with two primary options: the Global Combat Air Programme (GCAP), a collaborative effort by the UK, Italy, and Japan, and the U.S. Next Generation Air Dominance (NGAD). The decision, expected by the mid-2030s, will depend on cost, technological maturity, and geopolitical factors.

1. **GCAP Option:**

   - **Current Status:** At the 2025 Avalon Airshow (March 2025), RAAF Air Vice-Marshal Nicholas Hogan received an informational briefing from GCAP partners. The session focused on understanding interoperability with RAAF operations, but Hogan emphasised the program's early stage and uncertainties, with no formal participation options presented to the government.

   - **Prospects:** Australia's interest remains exploratory, with GCAP's Pacific-focused design and alignment with AUKUS making it a long-term contender. However, the programme's nascent stage and Australia's strong ties to the U.S. limit short-term commitment prospects.

2. **NGAD Option:**

   - **Advantages:** NGAD's advanced prototype stage offers earlier access to cutting-edge technology compared to GCAP. Additionally, Australia's MQ-28 Ghost Bat, developed with Boeing, complements NGAD's focus on Collaborative Combat Aircraft (CCA), enabling seamless integration.

   - **Prospects:** NGAD is likely the preferred option due to technological maturity and strategic alignment with the U.S.

Australia is cautiously assessing both GCAP and NGAD, favouring F-47 (NGAD) due to its advanced development and interaction with existing Australian capabilities. However, GCAP's regional relevance keeps it in contention for long-term evaluation. A formal decision is anticipated closer to the mid-2030s, when the RAAF's replacement timeline nears.

INDONESIA

FIFTH GENERATION: KAAN TF-XX

In June 2025, Indonesia signed an agreement with Turkey to procure 48 KAAN fifth-generation fighter jets. The contract was formalised during the 2025 Indo Defence Expo and Forum in Jakarta, with Turkish Aerospace Industries (TAI), the developer of the stealth aircraft, representing the Turkish side.

The KAAN fighter, formerly known as the TF-X, was first unveiled at the 2019 Paris Air Show and successfully completed its maiden flight in 2024. It is a multi-role stealth platform, engineered to deliver high performance in both air-to-air and air-to-ground missions. The aircraft will be powered by the indigenously developed TF35000 turbofan engine, which is currently under advanced stages of development.

According to the agreement, all 48 aircraft will be delivered over 10 years. Production will take place primarily in Turkey, with active involvement from Indonesian industry, aimed at strengthening local capabilities and advancing the country's aerospace ecosystem.

A key component of the deal is a technology transfer arrangement, which is expected to significantly enhance Indonesia's domestic aviation and defence manufacturing capabilities. Although the exact contract value has not been officially disclosed, Turkish media reports estimate the deal to be worth nearly US$10 billion.

FOURTH/4.5TH GENERATION: KF-X/KF-21

Indonesia is partnering with South Korea to develop the KF-21 Boramae, a 4.5-generation fighter jet under the KF-X (Korean Fighter Xperiment) programme. The twin-engine jet is being co-developed by South Korea's Defence Acquisition Programme Administration (DAPA) and Korea Aerospace Industries (KAI).

In January 2016, the two countries signed an agreement, with Indonesia committed to funding 20% of the programme's US$6.2 billion development costs by 2028. In return, Indonesia would receive one prototype and access to technical data.

As of 2023, Indonesia had paid only US$204 million out of the agreed sum of US$1.2 billion. In May 2024, Indonesia proposed reducing its payment to US$442 million, citing concerns over technology transfer. Despite these issues, Indonesia has expressed interest in purchasing 48 KF-21 jets once production begins. These aircraft will be assembled locally at PT Dirgantara Indonesia's (PTDI) facility.

In June 2025, both the participating countries signed a revised agreement on Indonesia's participation in the KF-21 programme during the Indo Defence Expo in Jakarta. According to the revised deal, Indonesia's revised contribution will be US$438 million (600 billion won).

Indonesia is expected to spend US$234 million on the programme between 2025 and 2030. The agreement ensures Indonesia's continued involvement in the KF-21 project, even as it explores other fighter jet options, such as Turkey's KAAN jet.

FOURTH/4.5TH GENERATION: F-15IDN

In February 2022, the U.S. State Department approved the sale of up to 36 Boeing F-15 Advanced Eagle fighter jets and related equipment to Indonesia, valued at approximately US$13.9 billion. The package includes not only the aircraft but also spare parts, mission kits, training, and other support services.

In August 2023, Indonesia took a step further when Air Vice Marshal Yusuf Jauhari, head of the Defence Facilities Agency, and Mark Sears, Boeing Fighter's Vice President and Programme Manager, signed a Memorandum of Understanding (MoU) for the procurement of up to 24 F-15 fighter jets. These jets will be designated as the F-15IDN, a customised variant of the F-15EX, which is also being delivered to the U.S. Air Force.

The F-15EX is a modernised version of the classic F-15, featuring digital fly-by-wire controls, advanced electronic warfare systems, a fully digital glass cockpit, and state-of-the-art mission systems and software.

However, the deal has yet to be finalised. In April 2025, Boeing offered to manufacture 85% of the F-15EX jets locally in Indonesia if the country commits to the purchase, demonstrating its willingness to support Indonesia's local defence industry. The deal is expected to be finalised by the end of 2025.

FOURTH/4.5TH GENERATION: RAFALE

In February 2022, Indonesia signed a deal with France worth US$8.1 billion to purchase 42 Rafale fighter jets. This agreement is part of a broader collaboration that also includes submarine and ammunition development. According to France's former Defence Minister, Florence Parly, Indonesia became the second country in the Indo-Pacific region, after India, to acquire these jets.

The procurement is being carried out in phases. In September 2022, Indonesia signed a contract for the first batch of six jets, valued at US$1.1 billion. This was followed in April 2023 by an agreement for 18 more aircraft, costing US$2.3 billion. Finally, in January 2024, Indonesia completed the deal by signing a contract for the remaining 18 jets, securing the full order of 42 Rafales. Deliveries of the first six aircraft are expected to start in February 2026.

The Rafale is equipped with an advanced cockpit featuring a wide-angle holographic display that provides pilots with control data, mission information, and firing cues. It also comes with cutting-edge systems, including the RBE2 passive electronically scanned radar, a laser warning receiver, missile warning systems, detection systems, and jammers. These 42 jets will replace Indonesia's ageing fleet of Northrop Grumman F-5 light fighters.

Between 2025 and 2030, Indonesia is expected to spend approximately US$5.2 billion on this programme.

FOURTH/4.5TH GENERATION: MIRAGE 2000-5

In June 2023, Indonesia signed a contract worth US$792 million with Excalibur International, a unit of the Czech defence company Czechoslovak Group (CSG), to procure 12 used Mirage 2000-5 fighter jets. The jets previously used by Qatar have been procured to meet the Air Force's temporary operational needs until the recently purchased Rafale fighter aircraft arrive. Indonesia needs to urgently replace its rapidly ageing fleet of F-16, Su-27, and Su-30 jets. Nine of the Mirage fighters are single-seaters, and three are double-seaters. Additionally, the acquisition also includes 14 engines, a three-year support services package, key ground support equipment, and crew training solutions. The 12 Mirage's are expected to be delivered by 2025. This deal however has received much criticism by Indonesia's opposition lawmakers, who argue the negatives of buying an older aircraft model as opposed to a more advanced fighter.

JAPAN

FIFTH GENERATION: F-35 A AND B

In July 2020, the U.S. government approved Japan's purchase of 105 F-35 Joint Strike Fighters, including 63 F-35A conventional take-off and landing aircraft and 42 F-35 short take-off and landing variants. This US$23 billion acquisition included 110 Pratt & Whitney F135 engines, as well as related electronic warfare and communications systems, the Autonomic Logistics Information System, training equipment, infrared flares, performance-based logistics, software systems, and spare and repair parts.

This procurement followed an initial purchase of 38 F-35 CTOL aircraft in May 2012 for around US$10 billion. Each aircraft was equipped with Pratt & Whitney F-135 engines, electronic warfare systems, C4I and CNI systems, the Autonomic Logistics Global Support System (ALGS), the Autonomic Logistics Information System (ALIS), flight mission trainers, and weapons employment capabilities.

Much of the aircraft production is done in Japan with Mitsubishi Heavy Industries (MHI), Mitsubishi Electric Company (MELCO), and IHI Corp. involved in the production of the F-35A Final Assembly and Checkout (FACO), mission systems radar and EODAS components, and F135 engine component production and FACO, respectively. The Japanese MoD has allocated around US$946 million (JPY138.7 billion) to procure eight F-35As and US$454 million (JPY66.5 billion) to procure three F-35Bs in the fiscal year 2025 budget. Overall, Japan is estimated to spend approximately US$33 billion on this program, with around US$11.8 billion allocated for the period between 2025 and 2030.

SIXTH GENERATION: GCAP

In December 2022, Japan, the UK, and Italy announced a partnership to jointly develop a sixth-generation fighter jet under the Global Combat Air Programme (GCAP). This collaboration was driven by the immense costs, risks, and technical challenges of independently pursuing such an advanced aircraft.

For Japan, this programme has strategic significance as it aligns with plans to replace or enhance the Japan Air Self-Defence Force's fleet of 90 F-2 fighters with a next-generation platform. The GCAP fighter, planned for service by 2035, will also replace the UK's Eurofighter Typhoons (144 aircraft) and Italy's 94 Typhoons. The joint effort combines Japan's "F-3/F-X" programme with the UK's "Tempest" initiative to create a unified sixth-generation fighter. The aircraft is expected to enter service ahead of Europe's competing FCAS project (led by France, Germany, and Spain) and remain operational until 2070.

To strengthen collaboration, in December 2024, BAE Systems (UK), Leonardo (Italy), and Japan Aircraft Industrial Enhancement Co. Ltd. (JAIEC) announced plans to establish a joint venture for the GCAP programme. Each partner will hold an equal 33.3% stake, combining their expertise to drive the design and development of the aircraft. The joint venture is expected to be operational by mid-2025.

As of 2024, the GCAP programme focuses on developing the sixth-generation fighter jet. Unlike Europe's FCAS initiative, which includes broader air combat systems, GCAP partner nations have chosen to pursue additional assets independently. For example, the UK is advancing its LANCA programme for uncrewed systems.

In terms of funding, the UK and Japan are leading contributors. The UK has already invested US$2.5 billion in the project and plans to allocate approximately US$14.6 billion over the next decade. Japan's Ministry of Defence has earmarked US$800 million for GCAP in the 2025-2026 fiscal year.

COLLABORATIVE COMBAT AIRCRAFT (CCA)/LOYAL WINGMAN

In 2022, Japan announced plans to develop advanced drones to support the current fleet of fighter jets as well as the future sixth-generation fighter being developed through the Global Combat Air Programme (GCAP) in partnership with the UK and Italy. This initiative aims to integrate uncrewed systems into Japan's air combat capabilities.

In 2023, Japan's defence agency began collaborating with the U.S. DoD to explore AI and machine learning technologies for future military drones. By 2024, the U.S. will formally include Japan in its Collaborative Combat Aircraft (CCA) programme, which focuses on crewed-uncrewed teaming and builds on the U.S. military's "loyal wingman" concept.

In December 2024, BAE Systems unveiled new imagery of its Loyal Wingman design, referred to as the Autonomous Collaborative Platform (ACP), showcasing the evolving role of uncrewed systems in combat. The following month, Japan's Ministry of Defence awarded Boeing a US$980,000 (¥155.1 million) contract to test aerial drones for crewed-uncrewed teaming research.

Concurrently, Japan's Mitsubishi Heavy Industries (MHI) is also developing its own Collaborative Combat Aircraft (CCA) concepts. At the Japan International Aerospace Exhibition in October 2024, MHI unveiled two designs. The first, called the Affordable Rapid Prototype Missile Drone Concept 20X (ARMDC-20X), is a missile-like drone intended for combat support roles. The second, which is yet to be named, is a high-performance tactical combat uncrewed aerial vehicle (UAV) designed for more advanced missions. Both concepts are being developed primarily for combat and intelligence, surveillance, and reconnaissance (ISR) operations. Japan is estimated to spend approximately US$1 billion on this programme, with around US$200 million allocated for the period between 2025 and 2030.

MALAYSIA

FOURTH/4.5TH GENERATION: SECOND-HAND F/A-18C/D HORNETS

In June 2025, the U.S. officially approved Malaysia's request to acquire up to 33 second-hand F/A-18C and D Hornet fighter jets from Kuwait. This transfer, governed by the U.S. Arms Export Control Act, follows months of negotiations involving all three parties, including Malaysia, Kuwait, and the U.S.

The Royal Malaysian Air Force (RMAF) has long faced operational gaps, particularly after its MiG-29s were retired and its current F/A-18D Hornets showed increasing wear. The Kuwaiti Hornets, acquired in the 1990s and many still with considerable airframe life remaining, present a cost-effective interim solution. While not cutting-edge by today's standards, these legacy Hornets still offer credible multirole capability and will help maintain Malaysia's air combat readiness.

The transfer will only proceed once Kuwait completes the induction of its newer Eurofighter Typhoons and F/A-18E/F Super Hornets. Malaysia's air chief, General Asghar Khan, confirmed the approval at the RMAF's 66th anniversary celebration.

Although the deal has not yet been formally signed, Malaysia is estimated to receive the jets by 2027 and will spend approximately US$33 million on this programme.

FOURTH/4.5TH GENERATION: CAPABILITY 55 - FA-50M

Malaysia signed a contract with South Korea in May 2023 to purchase 18 FA-50 light attack aircraft for US$920 million, as part of its Air Force's Capability 55 plan. The LCA Tejas from India and Turkey's Hurjet were also in competition for this programme but ultimately lost out to the FA-50. Jointly manufactured by Korea Aerospace Industries (KAI) and Lockheed Martin, the jet has a weapons payload carrying capacity of 4.5 tons, including the AIM-9 Sidewinder, AGM-65 Maverick, GBU-38/B/B, CBU-105 Sensor-Fused Weapon, Mk-82 LDGP bombs, and Cluster Bomb Units. The jet also features an internal three-barrel 20mm Gatling gun and an LAU-3/A 19-tube 2.75″ rocket launcher for firing Folding-Fin Aerial Rockets (FFAR).

Malaysia is procuring these aircraft to replace its 18 BAE Systems Hawk Mk 108 two-seat (trainer and attack) and Mk 208 single-seat light attack aircraft. Deliveries are expected between October 2026 and June 2027.

In a May 2024 interview, Park Shangshin, KAI's Regional Manager for Asia, stated that the Royal Malaysian Air Force (RMAF) is likely to acquire another batch of 18 FA-50M light combat aircraft. Park anticipates that negotiations for the second batch will begin in the second half of 2026 and be completed by early 2027. If this happens, KAI will secure another contract worth nearly US$1 billion in 2027.

SINGAPORE

FIFTH GENERATION: F-35 A & B

In January 2020, Singapore announced the procurement of four F-35B (STOVL variant) fighters and associated equipment from the U.S., with an option for an additional eight aircraft. This contractual option was exercised in February 2023, resulting in a total programme value of

approximately US$2.8 billion. The initial four F-35Bs are anticipated to be delivered in 2026, with the subsequent eight units expected by 2028.

The aircraft will replace Singapore's ageing fleet of 60 F-16 fighter jets, which are expected to remain in service for at least another decade, according to Chief of Air Force Major-General Kelvin Khong. One of the main reasons behind Singapore's purchase of the F-35B variant was the aircraft's ability to take off fully loaded from runways as short as 600 feet and land vertically. This feature enables the country to reduce its dependence on long runways and mitigate the vulnerability of its airfields to potential attacks.

Moreover, in February 2024, the Republic of Singapore Air Force (RSAF) announced its plan to acquire a further eight F-35A (Conventional Takeoff and Landing) fighter jets, thereby increasing its fleet of fifth-generation fighters to a total of 20 by 2030. This was officially confirmed on 3 March 2025, when Singapore's Defence Minister Dr. Ng Eng Hen announced the purchase of eight additional F-35A fighter jets from the U.S. during the Committee of Supply Debate.

Both F-35 variants bring distinctive capabilities that will enhance the RSAF's overall effectiveness. The F-35As are designed for extended endurance and have the capacity to carry heavier payloads. They will complement the F-35Bs' short take-off and vertical landing (STOVL) capability, thus providing increased operational flexibility in land-constrained Singapore.

Singapore is projected to allocate approximately US$4.6 billion for the procurement of the F-35 aircraft, with an estimated US$3.4 billion expected to be spent between 2025 and 2030.

SOUTH KOREA

FIFTH GENERATION: F-35A

In March 2023, the South Korean government approved a plan to purchase F-35A fighter jets and related equipment from the U.S. for US$2.85 billion. The U.S. State Department approved this procurement in September of the same year. In December 2023, South Korea's Defence Acquisition Programme Administration (DAPA) finalised the contract with U.S. aerospace firm Lockheed Martin. Under this agreement, Seoul will acquire 20 of the latest F-35A stealth fighter jets.

This acquisition aims to strengthen South Korea's aerial strike capabilities amid growing concerns about North Korea's rapid military modernisation and expanding missile arsenal. The new F-35A jets will be the most advanced 'Block 4' variant, featuring software upgrades, extended combat range, enhanced weapons-carrying capacity, and autonomous capabilities.

This latest procurement is in addition to the 40 F-35A 'Block 3' variant aircraft that South Korea had previously acquired in 2014, with the final deliveries completed in 2022. The delivery of the new F-35A fighters is scheduled to commence in 2027 and is expected to be completed by 2029.

FOURTH/4.5TH GENERATION: KF-X/KF-21 BORAMAE

In 2015, South Korea began developing the KF-21 Boramae, its own 4.5-generation fighter jet under the KF-X programme. The twin-engine aircraft is developed jointly by DAPA and KAI to replace the country's ageing fleet of F-4D/E Phantom II and F-5E/F Tiger II planes. A key feature of the KF-21 is its modular design, which enables the integration of new technologies even after the aircraft enters production. This approach reflects South Korea's long-term vision for the programme, which is likely to include the development of fifth- and sixth-generation variants of the KF-21.

In June 2024, the government signed a formal acquisition contract with KAI for the first 20 KF-21 fighters. The contract, valued at US$1.4 billion, is part of the Block 1 batch of the KF-21 programme. The first aircraft is expected to be delivered by the end of 2026, with the final 20 delivered by August 2027. This initial order is based on recommendations from the government-run Korea Institute for Defence Analyses, with the government expected to order an additional 20 units by the end of 2025 after further evaluation of the fighter's performance. Further, in June 2025, the country signed a US$1.76 billion deal for 20 additional KF-21 Boramae jets, which will be delivered by 2028.

The KF-21 is scheduled to develop a Block 2 version between 2026 and 2028 that will add air-to-ground capabilities and expand the performance envelope. The programme has faced various challenges, but the development is currently reported to be 80% complete. It is expected that the country will procure around 40 KF-21 Block I and 80 Block II aircraft by 2032.

Alongside the procurement of these fighters, South Korea has also signed contracts for the active electronically scanned array (AESA) radars and engines required for the KF-21. Hanwha Systems will provide 20 AESA radars for US$79.5 million, while Hanwha Aerospace will produce 40 General Electric F414-GE-400 engines, along with spares, for US$401.8 million. The first engine is expected to be delivered by the end of 2025.

As the programme moves into mass production in 2026, KAI aims to achieve a localisation rate of 65% for the KF-21. This will further bolster the development of the country's domestic aerospace industry. Seoul is estimated to spend around US$6.7 billion on this programme during the forecast period 2025 to 2030.

- **International partnerships:**

  - **Indonesia:** In January 2016, Indonesia and South Korea signed a cooperative agreement, where Indonesia agreed to contribute 20% of the programme's US$6.2 billion development costs by 2028. In return, it was to receive one prototype aircraft and access to the technical data and information related to the programme. However, as of 2023, Indonesia has only provided around US$280 million of its agreed US$1.2 billion investment share. By June 2025, both countries agreed to a revised proposal in which Indonesia will be paying a total of US$438 million, including barter options such as palm oil and coffee.

  - **United Arab Emirates:** In April 2025, the UAE signed an MoU that will enable it to monitor the KF-21 operations after induction, signalling long-term procurement interest, though no firm order has been placed yet.

LOYAL WINGMAN

As South Korea's indigenous KF-21 Boramae fighter jet nears mass production, the country is taking significant steps to incorporate loyal wingman uncrewed technology that can operate alongside the Air Force's fleet of fighters. Korea Aerospace Industries (KAI) is leading the national effort in this endeavour. In addition to its training role, the KF-21's twin-seat version is expected to perform crewed-uncrewed teaming (MUM-T) capabilities in its Block III configuration. This would involve a pilot in the back seat, or potentially artificial intelligence controlling drones. KAI has outlined a four-phased plan to develop MUM-T capabilities for the South Korean military.

- The first phase, spanning from 2023 to 2024, involved the company and the Air Force collaboratively developing technologies to make MUM-T a reality, using a helicopter and small, air launched uncrewed aerial vehicles.

- The second phase, from 2025 to 2028, will culminate in a technology demonstration where an FA-50 testbed showcases its ability to simultaneously control up to four adaptable aerial platforms.

  - South Korea unveiled a new stealth drone, classified as a Loyal Wingman, in February 2025. It's known as the Low Observable Uncrewed Wingman System (LOWUS).

  - Developed by Korean Air and the Agency for Defence Development (ADD), the drone features an internal weapons bay, RAM coatings, and stealth shaping similar to the US XQ-58a Valkyrie.

- The third phase, to be concluded by 2037, will transition increasingly capable MUM-T technologies from the FA-50 to the twin-seat KF-21. Concurrently, KAI is expected to reach the engineering and manufacturing design stage for an additional type of combat drone that would act as a loyal wingman to the piloted aircraft. A single KF-21 would control up to four of these combat drones, and each loyal wingman would command four adaptable aerial platforms. This would effectively expand the combat power of a single KF-21 to 20 uncrewed aircraft.

- In the fourth phase, from 2038 onward, KAI is expected to have sufficiently mastered MUM-T to achieve a true system of systems and operate as a loyal wingman with both the KF-21 and FA-50 fighter jets.

South Korea is estimated to spend around US$200 million on this programme during the forecast period between 2025 and 2030.

THAILAND

FOURTH/4.5TH GENERATION: JAS 39E/F GRIPEN

In March 2024, Thailand released a white paper detailing the Royal Thai Air Force's (RTAF) security strategy for 2024-2037. Air Chief Marshal Panpakdee Pattanakul emphasised the urgent need to modernise the country's aerial combat capabilities. Thailand is seeking to replace its ageing fleet of 12 F-16A and F-16 ADF aircraft between 2025 and 2034, with the options initially narrowed down to the U.S.-made F-16 Block 70/72 and Sweden's JAS 39E/F Gripen.

Thailand had previously considered acquiring the fifth-generation F-35 fighter jets but dropped the plan after the U.S. government raised concerns about the country's readiness to operate and maintain such advanced aircraft. Instead, Thailand shifted its focus to fourth-generation options, including upgraded F-16 Block 70/72 jets equipped with Northrop Grumman's APG-83 AESA radars, which offer advanced radar capabilities comparable to fifth-generation fighters.

In June 2025, Thailand confirmed its decision to procure the Swedish-made SAAB JAS 39E/F Gripen as part of a broader effort to modernise the RTAF. The Gripen beat Lockheed Martin's proposal for the F-16 Block 70/72. Under the programme's initial phase, Thailand will purchase four Gripen jets, three single-seat "E" variants and one two-seat "F" variant with deliveries scheduled between 2025 and 2029. Over the next decade, the RTAF plans to acquire a total of 12–14 Gripen E/F aircraft, ultimately replacing its ageing F-16A/B Block 15 ADF fleet.

The Gripen comes equipped with state-of-the-art systems, including the Raven ES 05 AESA radar, advanced electro-optical and infrared sensors, secure datalinks, electronic warfare capabilities, and compatibility with Meteor and IRIS-T missiles. These features will significantly enhance Thailand's air combat effectiveness.

The Thai Cabinet is expected to approve the purchase by the summer of 2025, with the contract likely to be signed by August 2025. The first phase, which involves the acquisition of four aircraft, is estimated to cost US$600 million (approximately 19.5 billion baht). By 2034, Thailand is projected to spend a total of US$1.8 billion on the programme, with around US$1.1 billion earmarked to be spent between 2025 and 2030.

EUROPE

Europe's fighter aircraft market is witnessing robust growth, driven by geopolitical tensions, modernisation imperatives, and a race to field sixth-generation technologies. Two sixth-generation programmes define Europe's future combat ambitions. The Future Combat Air System (FCAS), jointly developed by France, Germany, and Spain, aims to field the Next Generation Fighter by the 2040s. FCAS will feature advanced stealth, a networked "combat cloud," and loyal wingman drones. In parallel, the UK, Italy, and Japan are advancing the Global Combat Air Programme (GCAP), which will merge Britain's Tempest and Japan's F-X into a unified sixth-generation platform, scheduled for service by 2035.

Fifth-generation fighters dominate current procurement. The F-35 Lightning II has emerged as Europe's most widely adopted stealth fighter, with Belgium, the Czech Republic, Denmark, Finland, Germany, Greece, Italy, the Netherlands, Norway, and Poland all acquiring it to bolster NATO interoperability. Germany and Italy supplement their fleets with Eurofighter Typhoons, while France continues to invest heavily in Rafale upgrades.

Looking ahead, Portugal is evaluating the F-35s alongside European alternatives to replace its F-16s. Poland is considering the KF-21 Boramae to complement its F-35s and FA-50s, reflecting a trend toward diversified fleets. Geopolitical rivalries are shaping these decisions: Russia's aggression in Ukraine has driven accelerated procurements, while tensions between Greece and Turkey influence acquisitions on both sides of the Aegean.

Turkey's position in the market is particularly significant. After being excluded from the F-35 programme in 2019 over its S-400 missile defence purchase, Ankara advanced the indigenous TAI Kaan stealth fighter to mitigate capability gaps. Nevertheless, in 2025, Turkey reopened negotiations with Washington to rejoin the F-35 program, likely motivated by the desire to access critical technologies and sustain its industrial base.

Overall, the European fighter aircraft market is forecast to reach nearly US$95.9 billion by 2030 cumulatively. Germany will remain the most significant contributor, accounting for over 15% of total spending, followed by Italy, Turkey, Finland, France, and Greece. The market is projected to grow from US$13.6 billion in 2025 to US$17.6 billion in 2030, at a CAGR of 5.3%. As sixth-generation programmes mature, competition between U.S., European, and emerging Asian platforms is expected to reshape Europe's airpower landscape by mid-century.

FIGHTER AIRCRAFT MARKETS IN EUROPE, 2025-2030, US$ MILLIONS

Table 4: Fighter Aircraft Markets in Europe (Selected Countries) 2025-2030, US$ Millions

Fighter Aircraft	2025	2026	2027	2028	2029	2030	Total
Sixth Generation	1,250.0	1,500.0	1,500.0	1,550.0	1,650.0	1,550.0	9,000.0
Fifth Generation	7,090.0	8,157.0	9,300.0	10,725.0	11,355.0	12,050.0	58,677.0
Fourth /4.5th Generation	5,176.0	4,819.0	4,430.0	4,780.0	4,715.0	3,880.0	27,800.0
Loyal Wingman	50.0	75.0	75.0	75.0	75.0	75.0	425.0
Total	**13,566.0**	**14,551.0**	**15,305.0**	**17,130.0**	**17,795.0**	**17,555.0**	**95,902.0**

Figure 4 Fighter Aircraft Markets, Europe (Selected Countries), 2025-2030, US$ Millions

SIXTH GENERATION AIRCRAFT DEVELOPMENT

SIXTH GENERATION: FUTURE COMBAT AIR SYSTEM (FCAS) - FRANCE, GERMANY, SPAIN

Future Combat Air System (FCAS) is a multinational next-generation fighter aircraft programme involving France, Germany, and Spain. Launched in 2017 with a total budget of over US$100 billion, this programme encompasses the development of the Next Generation Fighter (NGF), Remote Carrier (RC)'s 'loyal wingmen' drones, and the Air Combat Cloud (ACC) networking system. These assets will be part of a fully networked 'system of systems' based on open architectures, which will further allow the integration of other platforms.

The NGF is a sixth-generation aircraft that is expected to replace the current generation of Rafale, Eurofighter Typhoon, and EF-18 Hornet jets for the respective countries. A test flight for a demonstrator is anticipated to take place around 2028-2029, with entry into service expected around 2040.

Technology & design:

Even though there is not much information available on the technical specifications of the NGF, it is expected to weigh less than 20 tons and have advanced stealth features. It is expected to have a new compact engine that can produce greater power while operating at higher temperatures. In fact, the conditions could reach 2100 Kelvin (1826.85 degrees Celsius) at the turbine inlet, 250 Kelvin (250 degrees Celsius) more than those of the M88, the engine currently powering Dassault's Rafale. This would necessitate technological breakthroughs in materials and components. France is currently developing a variable-cycle engine capable of operating at both supersonic and subsonic speeds.

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Project stage - Phase 1:

In February 2020, Dassault and Airbus, along with their partners MTU Aero Engines, Safran, MBDA, and Thales, were awarded an initial framework contract (Phase 1A) that lasted 18 months, extending into the first half of 2022. In December 2022, the French General Directorate for Armament (DGA) awarded a US$3.4 billion Phase 1B contract to Dassault Aviation, Airbus, Indra, and the European Military Engine Team (Eumet) consisting of Safran Aircraft Engines, MTU Aero, and ITP Aero, to develop the FCAS demonstrator and its components. While Safran is working on the combustion chamber at the heart of the motor, MTU is working on the front section of the motor, and ITP is working on the back part.

The roles and responsibilities of Phase 1B are as follows:

- Next-Generation Weapon System (NGWS) consistency, demonstrations, and consolidation will be handled by Airbus, Dassault Aviation, and Indra Sistemas as co-contracting partners.
- The development of the NGF is to be taken care of by Dassault Aviation for France as the prime contractor, and Airbus as the main partner for Germany and Spain.
- The development of the new generation fighter engine is being handled by the 50/50 joint venture EUMET, between Safran Aircraft Engines for France and MTU Aero Engines for Germany (prime contractors), and ITP for Spain (main partner).
- Airbus will develop the uncrewed systems and remote carrier (RC) for Germany as the prime contractor, while MBDA and Satnus will share responsibilities for Spain as the main partners.

- Airbus, Dassault Aviation, and Indra Sistemas will develop the simulation systems as co-contracting partners.
- Indra Sistemas is developing the sensors for Spain, while Thales and FCMS share responsibilities for France and Germany, respectively.

In November 2023, a French Air and Space Force official told reporters that the programme had selected four different fighter designs, which would be narrowed down to two by June 2024, with the final selection expected to take place by the end of 2025. On 6 February 2025, France and Germany announced a joint US$75 million contract, to be evenly divided over two years, supporting FCAS research and technology efforts.

Initially, the NGF was supposed to be operational across all three countries by 2040; however, conflicts and delays have now pushed this timeline into the 2050s. The programme has been plagued by infighting over work sharing, product specifications, design, financial aspects, technology sharing, and leadership, primarily between France and Germany.

Project stage - Phase 2:

Work on Phase 2, which will include research and technology, as well as building a fighter demonstrator, is expected to commence in 2026-2027 at a cost of around US$5.5 billion and will continue until 2029. Emmanuel Chiva, head of the General Directorate for Armament, stated in October 2024 that France has allocated funding for this second phase of the Future Combat Air System in its 2025 defence budget.

In November 2023, the Belgian defence ministry announced its official participation in the program, set to begin in June 2025. While details regarding Belgium's future role as a full-time FCAS partner are not yet available, it is anticipated that the country will join during the program's second phase.

International partnership:

In November 2023, the Belgian Defence Ministry announced its official participation in the programme, starting in June 2025. Even though details about Belgium's future role as a full-time FCAS partner are not available yet, it is expected to enter only during the programme's second phase, with an investment of around US$2 billion. This is expected to present opportunities for large and small indigenous firms, including Sonaca and/or Orizio.

As of the latest updates in November 2024, Germany is in discussions with its partner nations, Spain and France, about allowing India to join the programme as an observer country. This arrangement would enable Indian private defence contractors to engage in the program's supply chain, even if India does not officially join or procure the aircraft.

FCAS –REMOTE CARRIER (RC) LOYAL WINGMAN

The FCAS programme aims to develop autonomous drones, under the Loyal Wingman concept, which will operate in concert with crewed fighter aircraft. The defence contractors working on the FCAS programme, including Airbus and Saab, are also involved in this initiative. Recent advancements showcased by Airbus and Saab demonstrate the promising capabilities of these Loyal Wingman systems. Airbus' new Wingman concept, unveiled at the 2024 ILA Berlin Air Show, features a highly manoeuvrable, low-observable UAS capable of providing air support, electronic warfare, and even armament delivery. Meanwhile, Saab has revealed a supersonic, stealthy Loyal Wingman design with the potential to operate independently or in coordination with crewed fighters.

These platforms are designed to augment the capabilities of crewed aircraft, providing additional sensors, firepower, and tactical flexibility. By offloading specific mission-critical tasks to autonomous systems, Loyal Wingmen can enhance the overall combat effectiveness of a joint force while also reducing the risk to human pilots.

As the FCAS programme continues to evolve, the integration of these uncrewed assets will be a critical focus. It is expected that the development of loyal wingman systems will proceed in parallel with the FCAS programme..

SIXTH GENERATION: GLOBAL COMBAT AIR PROGRAMME (GCAP): UK, JAPAN AND ITALY

In July 2018, the UK unveiled the model of its new sixth-generation supersonic fighter jet, the "Tempest." It announced a commitment to invest GBP2 billion in its development by 2025 and deploy it by 2035. This decision came as a response to being excluded from the Sixth-Generation Future Combat Air System (FCAS) programme, led by France and Germany.

Fast-forward to December 2022, when the UK, Japan, and Italy announced a partnership to jointly develop a sixth-generation fighter jet under the Global Combat Air Programme (GCAP). This collaboration was formed to share the enormous costs, risks, and technical challenges of such a complex project. The new fighter is intended to replace the UK's fleet of 144 Eurofighter Typhoons, Italy's 94 Typhoons, and Japan's 90 F-2 fighters. A demonstrator for the GCAP aircraft is planned to make its first flight by 2028.

As part of the collaborative effort, the GCAP project merges the UK's "Tempest" and Japan's "F-3/F-X" sixth-generation fighter programmes into a unified platform, with deployment targeted for 2035. The detailed design and development phase is scheduled to begin in 2025. The new fighter will be designed to operate seamlessly with U.S. military and NATO forces, ensuring compatibility for future joint operations. Once operational, the GCAP aircraft will precede the competing FCAS project, led by France, Germany, and Spain, and is expected to remain in service until 2070.

In December 2023, the UK, Japan, and Italy took a significant step forward by signing a treaty to establish the GCAP International Government Organisation (GIGO). Headquartered in the UK, GIGO will oversee the management of the GCAP programme.

Technology & design:

The GCAP fighter jet is set to incorporate cutting-edge technologies, including hypersonic missiles, delta wings, outward-pointing vertical stabilisers, and advanced directed-energy weapons, such as lasers. It will feature a futuristic augmented reality cockpit, capable of projecting controls onto unconventional surfaces, such as the pilot's flight suit. The cockpit will enable pilots to interact with the system through voice commands, gestures, eye tracking, or traditional controls, such as HOTAS (Hands-On Throttle and Stick). Biometric and psychoanalytical sensors will monitor the pilot's physical and mental state, detecting issues such as hypoxia, stress, or cognitive overload.

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Rolls-Royce is playing a key role in enhancing the jet's stealth capabilities. In June 2023, the company announced progress in testing uniquely designed engine components, including an engine duct that slows air from supersonic to subsonic speeds. This innovation reduces the number of moving parts, improving stealth. The tests were conducted at Rolls-Royce's Filton facility in Bristol, where the Concorde Olympus engine was also tested in the 1960s.

Industry partners:

BAE Systems is leading the airframe design for the GCAP fighter, with Italy's Leonardo handling the avionics and radar systems. Notably, up to 30% of the aircraft's components will be made from advanced composite materials and produced using additive manufacturing at BAE Systems' Flexible Factory of the Future (FFF). This approach will enable lightweight, power-dense configurations capable of withstanding higher operating temperatures.

Rolls-Royce is developing the advanced jet engine and electrical power system, while MBDA UK is responsible for the aircraft's armaments. Mitsubishi Heavy Industries and IHI Corporation are contributing additional engine technologies, and Mitsubishi Electric is working on the advanced electronics. Italy's Avio Aero is focused on thermal management systems, while MBDA Italy is developing missile systems.

Funding:

The UK and Japan are expected to be the primary financial contributors to the GCAP programme. The UK has already invested US$2.5 billion and committed to spending approximately US$14.6 billion over the next decade. Japan's Ministry of Defence has allocated US$483 million in FY2024-2025 and US$800 million in FY2025-2026.

Meanwhile, in October 2023, Italy announced that it would substantially increase its funding for GCAP. According to the 2024 defence budget document, Rome plans to invest around US$600 million in 2024 on the development of GCAP. Furthermore, the Italian Ministry of Defence pledged approximately US$8.1 billion for the project between 2029 and 2037, doubling its earlier commitment of US$4 billion.

International partnership:

Currently, a three-partner program, the GCAP, aims to expand its involvement to more nations. The Kingdom of Saudi Arabia has expressed its interest, while the UK is reaching out to Australia and India to join as partners.

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BELGIUM

FIFTH GENERATION: F-35

In October 2018, Belgium signed a contract to procure 34 F-35 fighter jets from the U.S., selecting them over competing bids from Spain, Italy, Germany, and the UK, which offered the Eurofighter Typhoon, as well as France's Dassault Rafale. Lockheed Martin secured the deal due to the F-35's status as the natural successor to Belgium's ageing fleet of F-16s, combined with its technical superiority and lower acquisition cost. The acquisition is part of Belgium's Essential Security Interest (ESI) programme, which requires the involvement of Belgian companies as industrial partners. The procurement, valued at approximately US$4.6 billion, includes deliveries expected between 2023 and 2030. Further, in April 2025, Belgian Prime Minister Bart De Wever and Defence Minister Theo Francken announced plans to acquire additional F-35s to expand the fleet beyond the original 34 units.

By early 2025, Belgium had received eight F-35s, stationed at Luke Air Force Base in Arizona for pilot and technician training. These aircraft are scheduled for transfer to Belgium in late 2025. To support the fleet, Belgium has allocated over US$300 million to modernise its airbases in Florennes and Kleine-Brogel, including upgrades such as hangars, simulators, maintenance centres, and operational housing. Between 2025 and 2030, Belgium is projected to spend around US$4.1 billion on the F-35 program.

CROATIA

FOURTH/4.5TH GENERATION: F3-SR RAFALE

In May 2021, the Croatian Ministry of Defence finalised its decision to procure the Rafale fighter jet to modernise its ageing Air Force fleet. The US$1.2 billion agreement involves the purchase of 12 second-hand Rafale jets from France, replacing Croatia's outdated Russian-made MiG-21s. The deal includes 10 single-seat and two dual-seat Rafales, all outfitted with the advanced F3-R standard. In addition to the aircraft, Croatia will receive a flight simulator, a basic weapons package, ground support equipment, spare parts, and a three-year field support package with a one-year warranty. The contract also covers comprehensive training for pilots and maintenance personnel.

The Rafale was chosen through a competitive bidding process that included proposals from Lockheed Martin's F-16 and Saab's Gripen. Deliveries began in October 2023, with the final jet delivered in April 2025.

CZECHIA

FIFTH GENERATION: F-35

In January 2024, the Czech Republic signed a deal with the U.S. to purchase 24 F-35 Lightning II fighter jets. The US$6.6 billion deal encompasses not only the acquisition of the aircraft but also extensive personnel training, logistical support, and related services. Additionally, the agreement will involve the participation of 13 Czech industrial partners and academic institutions in various aspects of the programme, including component fabrication, research and development, and aircraft sustainment.

The decision to invest in the F-35 comes at a crucial time, as the Czech Republic seeks to modernise its ageing fleet of Gripen fighter jets, which are scheduled to retire by 2027. The acquisition of the F-35 also strengthens the country's position within the NATO alliance, as the fifth-generation fighter jet is considered the backbone of the alliance's air superiority. By joining the global F-35 programme, the country will benefit from increased interoperability and enhanced deterrence capabilities, further solidifying its commitment to collective defence.

According to Lockheed Martin, the first F-35s are expected to be delivered to the Czech Air Force in 2031, with deliveries continuing until 2035. A total of US$3.1 billion is expected to be spent on this procurement over the period from 2025 to 2030.

FOURTH/4.5TH GENERATION: JAS 39 C/D GRIPEN LEASE

In June 2025, the Czech MoD signed an agreement with Saab to extend the lease of twelve Saab JAS-39 Gripen fighter jets until 2035. This agreement intends to ensure that the Czech Air Force maintains its operational readiness until the arrival of twenty-four F-35A Lightning II aircraft,

scheduled between 2031 and 2035. The fleet comprises ten single-seat Gripen C and two dual-seat Gripen D variants.

Valued at approximately US$790 million, the deal also includes maintenance, training, and comprehensive support. Notably, it was negotiated at a 25% lower cost compared to Sweden's initial offer.

The lease of the JAS-39 C/D Gripen aircraft for the Czech Air Force, which commenced in 2005, was set to expire in 2027 after an extension of twelve years. Between 2025 and 2030, Czechia is estimated to spend approximately US$165 million on the lease of Gripen fighter jets.

DENMARK

FIFTH GENERATION: F-35

Denmark joined the F-35 programme in 2002 during the system development and demonstration phase. However, it was not until December 2016 that the Danish government approved a plan to replace its ageing F-16 jets with 27 F-35A fighter aircraft. The procurement of these aircraft is estimated to cost approximately US$3.1 billion, with deliveries scheduled to continue until 2027.

Although the country received its first F-35A fighter jet in 2021, the aircraft was initially based at Luke Air Force Base in Arizona, United States, for a two-year period of pilot and maintenance training. Four aircraft were delivered in September 2023, followed by an additional four in December 2024, thereby increasing the domestic fleet to a total of 15 jets.

The country is projected to allocate approximately US$1.2 billion for this programme between 2025 and 2030.

FINLAND

FIFTH GENERATION: F-35

In December 2021, the Finnish Defence Forces Logistics Command awarded Lockheed Martin a contract valued at US$9.4 billion for the procurement of 64 F-35A Lightning II aircraft and associated maintenance services. This contract also encompasses aircraft engines, related equipment, spare parts, replacement units, training materials, and servicing provisions.

Part of the HX Fighter programme, these aircraft are anticipated to replace the Finnish Air Force's fleet of F/A-18C/D Hornet multirole aircraft, which will be phased out by 2030 at the latest. The aircraft will be configured as Block 4, with Finland manufacturing significant components, including the forward fuselage, structural parts, and capabilities for equipment testing and maintenance.

Furthermore, the domestic industry is expected to play a crucial role in assembling the aircraft's F135 engine. Other contenders for this contract included Saab with its JAS-39 Gripen, Dassault with the Rafale, and Boeing with the F/A-18E/F Super Hornet, which has been operational with the Finnish armed forces since the 1990s.

Lockheed Martin commenced assembly of Finland's first F-35 (JF-501) in October 2024, with the aircraft planned to enter service in autumn 2025. Initial training for Finnish aircrews will commence at Eglin Air Force Base in autumn 2025. The aircraft are projected to achieve Initial Operational Capability by the end of 2027, with full operational capability within the Finnish Air Force by the end of 2030.

A total of US$7.2 billion is expected to be spent on this procurement over the period from 2025 to 2030.

FRANCE

FOURTH/4.5TH GENERATION: RAFALE

In January 2019, Dassault Aviation signed a US$2.3 billion contract with the French Armed Forces to develop and deliver 28 Rafale F4 fighter jets, the latest version of the aircraft. The F4 upgrade is being rolled out in three stages: 4.1, 4.2, and 4.3. The Block 4.1 version includes enhanced collaborative air combat capabilities, integration of the 1,000-kg Armement Air-Sol Modulaire (AASM) precision-guided bomb, upgrades to the Thales RBE2 AESA radar, a new fire protection and avoidance system, improved connectivity, the TALIOS long-range targeting system, increased cyber resilience, and enhanced detection systems. Work on the F4.2 standard is set to begin soon. The first Block 4.1 Rafale jets were delivered to the French Air and Space Force in March 2023, with all 28 expected to be delivered by 2026.

In addition to the F4 programme, France signed a contract in January 2021 to acquire 12 Rafale F3-R jets to replace aircraft sold to Greece. This deal, worth approximately US$788 million, aims to deliver the new aircraft by 2025. Most recently, in January 2024, the French Ministry of Defence placed an order for 42 more Rafales, valued at US$5.5 billion, with deliveries scheduled to be completed by 2030.

In March 2025, President Emmanuel Macron of France announced that the country would procure additional Rafale aircraft in the forthcoming years and allocate nearly US$1.6 billion (Euro 1.5 billion) to one of its air bases for the purpose of equipping its squadrons with state-of-the-art nuclear missile technology.

GERMANY

FIFTH GENERATION: F-35

In December 2022, Germany's parliamentary budget committee approved a US$8.4 billion package to purchase 35 F-35 fighter jets, along with munitions and related equipment. The deal includes 37 Pratt & Whitney F135-PW-100 engines, 105 AIM-120C-8 Advanced Medium Range Air-to-Air Missiles (AMRAAM), four AIM-120C-8 AMRAAM guidance sections, 75 AGM-158B/B2 Joint Air-to-Surface Standoff Missiles-Extended Range (JASSM-ER), two AGM-158 inert JASSMs with test instrumentation kits, 344 GBU-53 Small Diameter Bombs (SDB-II), and 30 AIM-9X Block II Sidewinder captive air training missiles. Additionally, the package provides mission simulators, system trainers, and other critical systems.

The F-35s are intended to replace Germany's ageing Tornado aircraft fleet. Key contractors for the programme include Lockheed Martin Aeronautics, Pratt & Whitney Military Engines, Boeing, and Raytheon Missiles and Defence.

In April 2025, Lockheed Martin was awarded US$13.4 million to support Germany's integration into the F-35 programme. This funding covers training, programme management, and supply chain setup, with work expected to continue through August 2026. Between 2025 and 2030, Germany is projected to spend approximately US$5.7 billion on the F-35 programme.

FOURTH/4.5TH GENERATION: EUROFIGHTER TYPHOONS

In November 2020, the German Parliament's Budget Committee approved a contract valued at US$6.35 billion for the procurement of 38 Eurofighter jets from Airbus for the German air force. This agreement is part of the German Ministry of Defence's long-term strategy to acquire at least 93 Eurofighter jets, in addition to 45 F-18 fighters from Boeing. The production of Tranche 4 jets commenced in late 2022, with deliveries scheduled to occur between 2025 and 2030.

In June 2024, Chancellor Scholz announced an additional order for 20 Tranche 4 jets, thereby increasing the total procurement to 58 aircraft. The 20 new Eurofighters, with an estimated cost of approximately US$2.2 billion, are intended to sustain Airbus's production line.

Between 2025 and 2030, Germany is projected to invest approximately US$6.7 billion in the F-35 programme.

GREECE

FOURTH/4.5TH GENERATION: RAFALE DG/EG

In January 2021, the Greek government inked a deal to purchase 12 pre-owned Rafale aircraft from the French Air and Space Force, along with 6 brand-new Rafale jets directly from Dassault Aviation. Following this initial purchase, Greece signed an agreement to acquire an additional six Rafale jets in March 2022. The expansion of the Rafale fleet is anticipated to grant Greece a strategic advantage in the Aegean Sea, where it has frequently intercepted Turkish F-16 aircraft breaching its airspace.

Notably, the Rafale procurement forms part of a broader defence pact between Greece and France, which encompasses the procurement of three cutting-edge Belharra frigates from the French Naval Group. This comprehensive collaboration underscores the increasing geopolitical alignment between Athens and Paris, as they collaborate to enhance Europe's strategic independence.

Greece received the initial batch of 18 Rafale fighter jets between 2022 and 2023, with five more arriving in 2024, and the last one in January 2025. The overall cost of this programme is estimated at approximately US$3.5 billion.

FIFTH GENERATION: F-35

In November 2020, the Greek government initiated the process to procure F-35 fifth-generation aircraft to modernise the Hellenic Air Force (HAF). The govt submitted a Letter of Request (LOR) to the U.S. Department of Defence, seeking the urgent acquisition of Lockheed Martin F-35 Lightning II jets. This effort will enhance Greece's air defence capabilities in response to regional security dynamics, particularly Turkey's ongoing plans to acquire F-16 aircraft from the U.S.

In January 2024, the U.S. government approved the potential sale of up to 40 F-35 aircraft to Greece, valued at US$8.6 billion. The complete package included 42 Pratt & Whitney F135-PW-100 engines (40 installed and two spares), full-mission simulators, system trainers, advanced electronic warfare systems, and comprehensive logistics management and support solutions.

In July 2024, Greece formalised its commitment by signing a Letter of Offer and Acceptance (LOA) through a U.S. Foreign Military Sale, confirming the purchase of 20 F-35 aircraft with associated support for US$3.5 billion. The agreement also included an option to procure an additional 20 aircraft, providing flexibility for future expansion. In May 2025, Lockheed Martin was awarded a US$17.2 million contract to provide critical engineering and technical support, facilitating Greece's integration into the F-35 Joint Strike Fighter program.

The main contractors for the deal are Lockheed Martin, responsible for the F-35 airframes, and Pratt & Whitney, providing the F135-PW-100 engines. Deliveries of the first F-35s to the HAF are scheduled to start in 2028, with the full delivery of the initial 20 aircraft expected to be completed by 2030. From 2025 to 2030, Greece is projected to invest approximately US$3.6 billion in the programme.

HUNGARY

FOURTH/4.5TH GENERATION: JAS 39 GRIPEN C/D

In February 2024, Hungary finalised an agreement with Saab to acquire four additional JAS 39 Gripen C/D multirole fighter jets, increasing its Gripen fleet to 18 aircraft. This deal amended the original 2001 contract between the Swedish Defence Materiel Administration (FMV) and Hungary for the purchase of 14 Gripens. Saab has also committed to providing ongoing upgrades and support for Hungary's Gripen fleet until at least 2035.

The acquisition aims to enhance Hungary's air defence capabilities and reinforce its commitments as a NATO member. The Gripen C/D fighters are versatile aircraft, capable of operating with a wide array of weaponry, including long- and short-range air-to-air missiles, heavy air-to-ground missiles, and precision-guided bombs. The newly acquired aircraft are anticipated to be delivered by 2026. Hungary's investment in this programme is expected to reach approximately US$480 million between 2025 and 2030.

ITALY

FOURTH/4.5TH GENERATION: EUROFIGHTER TYPHOONS

In December 2024, Italy signed a contract with the NATO Eurofighter and Tornado Management Agency (NETMA) to procure 24 additional Eurofighter Typhoon jets for the Italian Air Force. The deal also includes a comprehensive support and sustainment package for the entire Italian Typhoon fleet. The new jets will replace Italy's ageing Tranche 1 Eurofighters, delivered in 2004. These upgraded aircraft will feature advanced avionics, new sensors, improved connectivity, and enhanced weapon systems capable of deploying Brimstone III and Meteor missiles. Designed to meet the evolving demands of modern warfare, the jets will contribute to Italy's national and NATO defence strategies.

Eurofighter Typhoon, developed by a four-nation consortium comprising the UK, Germany, Spain, and Italy, is renowned for its versatility, delta-wing design, and advanced radar systems. Leaders from Eurofighter and Italy's defence industry have emphasised the economic and technological benefits of this acquisition, which will ensure the continued development while supporting thousands of skilled jobs across Europe. Delivery is expected before 2030.

FIFTH GENERATION: F-35

In August 2022, the Italian government signed a US$524 million contract with Lockheed Martin for the procurement of 18 F-35 Lightning II fighter jets. The order included 14 F-35A conventional take-off and landing (CTOL) variants and four

F-35B short take-off and vertical landing (STOVL) variants. Manufacturing is being carried out across facilities in Texas, California, the UK, and Italy, with final deliveries expected by June 2025.

Italy originally planned to acquire 131 F-35 fighters to replace its ageing AMX, Tornado, and Harrier fleets. However, due to budget constraints, the order was reduced to 90 aircraft, comprising 60 F-35As and 30 F-35Bs. Of the F-35Bs, 15 are allocated to the Italian Navy and 15 to the Air Force. By early 2025, Italy had received 24 F-35As and eight F-35Bs.

In March 2023, Italian Air Force Chief of Staff Luca Goretti advocated for an additional 41 F-35s by 2030, citing the Russian invasion of Ukraine as a critical factor in bolstering Italy's defence and NATO commitments. Subsequently, in September 2024, Italy's MoD approved the purchase of 25 more F-35s, bringing the total fleet to 115. This US$7.79 billion deal includes engines, equipment, and logistics support until 2035. Between 2025 and 2030, Italy is projected to spend approximately US$7.5 billion on the procurement programme.

NETHERLANDS

FIFTH GENERATION: F-35

The Netherlands joined the multinational F-35 programme in 1997, contributing US$800 million toward development costs. In September 2013, the Dutch government placed its first order for 37 F-35As as part of a US$5.9 billion deal, to replace its fleet of 60 F-16AM fighter jets and equip two squadrons. Although the initial plan was to procure 85 F-35s, budgetary constraints ultimately reduced the requirement to 52.

The Royal Netherlands Air Force (RNLAF) expanded its fleet in March 2021 with a second order for nine additional F-35As worth US$1.1 billion, enabling the formation of a third squadron. This was further supplemented by a third contract for six more aircraft in June 2022, completing the third squadron. In September 2024, the Dutch government approved the purchase of another six F-35As, bringing the total number of aircraft ordered to 58.

In response to heightened security concerns, including Russia's invasion of Ukraine, the Netherlands reopened De Peel Air Base to operate alongside Leeuwarden and Volkel as F-35 stations. The programme has also promoted significant domestic collaboration, with over 25 Dutch companies involved in advanced technology development and structural design projects as part of the F-35 initiative. A total of US$3.6 billion is expected to be spent on this procurement over the period from 2025 to 2030.

NORWAY

FIFTH GENERATION: F-35A

In 2008, Norway signed an agreement with Lockheed Martin to procure a total of 52 F-35A aircraft, valued at US$11.2 billion. Each year's procurement was contingent upon governmental approval. The inaugural jets were delivered to Lockheed's production facility in 2015 and subsequently transported to Norway's Orland base in November 2017.

The Royal Norwegian Air Force (RNAF) received six jets annually until 2022; however, only three were delivered in 2022. This reduction was attributable to an F-35B crash, which temporarily halted production and resulted in a backlog of aircraft requiring testing and withdrawal. Despite Norway's intention to retire its ageing F-16 fleet by 2024, production delays and issues related to the aircraft's Technical Refresh-3 (TR-3) hardware update rendered this timeline unfeasible. Nevertheless, in early April 2025, Lockheed Martin delivered the 51st and 52nd F-35a aircraft, thereby confirming Norway's fleet of 52 jets. A total of US$250 million is expected to be spent on this procurement over the period 2025-2030.

POLAND

FIFTH GENERATION: F-35A

In January 2020, Poland's Defence Minister, Mariusz Blaszczak, signed a deal with the U.S. Foreign Military Sales (USFMA) to buy 32 F-35A Block 4 jets. The US$4.6 billion contract includes 33 F135 engines, eight simulators, logistic support, and Autonomic Logistics Information Systems. This initiative aims to replace Poland's ageing Soviet-era Sukhoi Su-22 and MiG-29 aircraft with new fifth-generation fighters and to bolster its military amid growing Russian assertiveness in eastern Europe. Blaszczak has said the F-35s will work alongside Poland's existing systems, like Patriot missile defences and F-16s.

Lockheed Martin began producing the F-35s in 2023, with the first unit rolled out in August 2024. The initial training jets arrived in the U.S. in late December 2024, and Polish pilots started flying sorties in January 2025, at Ebbing ANGB, Arkansas. Deliveries to Poland will occur from 2026 to 2030, with four to six jets delivered each year. This purchase will make Poland the first F-35 user in the region, complementing its fleet of F-16 C/D Block 52+ fighters.

Additionally, in January 2025, Poland signed a separate US$75 million deal for 200 AARGM-ER anti-radiation missiles, which will be integrated with the F-35s and delivered between 2029 and 2035.

FOURTH/4.5TH GENERATION: FA-50 LCA

In September 2022, Poland signed a deal with South Korea to purchase 48 FA-50 light combat aircraft (LCA) to strengthen its armed forces amid security concerns linked to Russia's invasion of Ukraine. The agreement includes 12 FA-50GF (Block 10) and 36 FA-50PL (Block 20 with AESA radar) variants. This procurement is part of a US$13.7 billion defence package signed by both nations in early 2022. These new FA-50 jets will replace Poland’s ageing MiG-29 aircraft, which have Soviet-era technologies. Polish President Andrzej Duda stated that successfully integrating the FA-50 will make the MiG-29 and Su-22 aircraft fully redundant.

Poland received the first 12 FA-50GF jets by November 2023 and plans to acquire the remaining 36 FA-50PL jets between 2025 and 2028. The total expenditure for this programme is estimated at around US$2 billion from 2025 to 2030.

FOURTH/4.5TH GENERATION: KF-21

Poland is considering South Korea’s KF-21 Boramae to upgrade its air force, adding to its existing fleet of 48 FA-50s and 32 F-35As. In June 2025, Polish Air Force Commander General Ireneusz Nowak visited Korea Aerospace Industries in Sacheon, where he inspected FA-50PL production and test-flew the KF-21 prototype. This 4.5-generation fighter, featuring stealth capabilities and European weapon integration, is a leading candidate to replace Poland’s outdated Soviet-era jets. It competes with the Eurofighter Typhoon and F-15EX, fitting into Poland’s plan to acquire 32 more aircraft. A deal is anticipated by 2026.

PORTUGAL

FOURTH/4.5TH GENERATION: A 29N SUPER TUCANOF-16 BLOCK 70 VIPER

In December 2024, Portugal signed an agreement to procure 12 A-29N Super Tucano turboprop aircraft from the Brazilian aerospace manufacturer Embraer. These aircraft, equipped with comprehensive NATO communication systems, are designated for light-attack and advanced training missions. According to Embraer, Portugal will be the inaugural operator of this new aircraft model. The US$208 million contract aims to enhance Portugal’s capabilities in light-attack operations and pilot training. Deliveries are scheduled to commence in 2026, facilitating the gradual replacement of the Portuguese Air Force's older aircraft.

F-16 REPLACEMENT

The Portuguese Air Force (PoAF) is exploring options to replace its ageing F-16M fleet with next-generation fighters. Initially, Portugal leaned toward the U.S.-made Lockheed Martin F-35 Lightning II, due to its advanced stealth, sensor fusion, and NATO interoperability. If approved, the plan seeks to acquire 28 aircraft at an estimated cost of US$6 billion. The deliveries will start in 2032 and continue until 2046.

However, political and financial concerns have complicated the decision. In March 2025, Defence Minister Nuno Melo raised concerns about U.S. policies and challenges related to maintenance and access to support. Consequently, Portugal has shifted its focus to European alternatives, including the Saab Gripen, Dassault Rafale, and Eurofighter Typhoon, aligning with EU defence autonomy goals.

Despite this shift, collaboration between U.S. manufacturers and Portuguese industry remains active. On June 5, 2025, Lockheed Martin signed an MoU with AED Cluster Portugal, involving over 140 Portuguese companies in F-35 industrial participation. The final procurement decision remains uncertain, as Portugal seeks to strike a balance between European strategic alignment and cutting-edge technological capabilities.

ROMANIA

FIFTH GENERATION: F-35A

In April 2023, Romania's Supreme Council on National Defence (CSAT) announced plans to modernise the country's air force by acquiring 48 F-35A Lightning II jets through a two-phase procurement program.

In September 2024, the U.S. State Department approved a Foreign Military Sale for 32 F-35A aircraft, including engines and related equipment. This was followed by an official agreement by Romania in November 2024, valued at US$6.4 billion. The agreement covers 32 jets, 35 engines, pilot and technical training, simulators, logistics support, weapons, and ammunition. A Letter of Offer and Acceptance (LOA) was signed on November 21, 2024, in Bucharest.

Deliveries for the first 32 jets are expected to begin in 2031 and conclude by 2034. The program's second phase will add 16 more aircraft, bringing Romania's fleet to 48 F-35As, forming three squadrons of fifth-generation fighters.

The F-35A, developed by Lockheed Martin, is a multi-role stealth fighter designed for air defence, ground attack, and reconnaissance missions. Romania plans to invest US$4.5 billion in this programme between 2025 and 2030.

FOURTH/4.5TH GENERATION: F-16A

In November 2022, Romania signed a contract with Norway to procure 32 used F-16A fighter jets. The deal, valued at an estimated US$418 million, aims to replace its ageing fleet of MiG-21 fighters. Several factors drove the decision to acquire the F-16A platform. Firstly, the F-16A's proven capabilities, reliability, and compatibility with NATO systems make it an attractive choice to modernise the country's air force. Additionally, the availability of used, well-maintained F-16A jets from Norway's surplus inventory provided a cost-effective solution. These aircraft will significantly enhance Romania's ability to conduct air superiority, ground attack, and air defence missions, thereby strengthening the country's overall military posture.

The first deliveries of three aircraft occurred in May 2023, followed by another batch of three in the subsequent month. The final unit arrived in June 2025. With this procurement, Romania now possesses a fleet of 49 F-16s, including the 17 F-16 AM/BM Block 15 received from Portugal in 2021.

SLOVAKIA

FOURTH/4.5TH GENERATION: F-16 BLOCK 70 VIPER

In 2018, Slovakia initiated a major military procurement programme to replace its ageing fleet of MiG-29 fighter jets. After evaluating many options, including the Saab-manufactured Gripen, the Slovak MoD signed an agreement to purchase 14 F-16 Block 70 Viper aircraft from Lockheed Martin in November 2018, with the deal valued at nearly US$1.8 billion. One of the reasons for this was that the F-16s would be cheaper to procure and operate through 2040 as compared to the Gripen. They would also be able to integrate with NATO's interoperability standards.

The F-16 is a multi-role fighter jet operated by 25 countries, with more than 3,300 carriage and weapon integration variations. The latest Block 70/72 model, which can reach speeds of up to 2,414 kilometres per hour, is equipped with an advanced APG-83 AESA radar, an infrared search and track system, and a digital intercommunications system.

Originally scheduled for mid-2023, the first two F-16s were delivered to Slovakia only in January 2024, due to production delays. As of May 2025, five of the 14 have been produced and delivered; the remaining nine are expected to be delivered by the end of 2025.

In the summer of 2024, Slovakia indicated its intention to procure an additional four F-16 aircraft, citing NATO airspace patrol requirements. The supplementary procurement, valued at US$340 million, is presently under negotiation.

SPAIN

FOURTH/4.5TH GENERATION: EUROFIGHTER TYPHOONS – HALCON PROGRAMME

At the Berlin Air Show in June 2022, Spain signed a deal with the NATO Eurofighter and Tornado Management Agency (NETMA) to acquire 20 Eurofighter Typhoon jets. The procurement, dubbed the Halcon-1 programme, includes 16 single-seaters and 4 twin-seaters equipped with E-Scan radar, and will replace the Spanish Air Force's F-18 fleet in the Canary Islands. The US$2.15 billion (EUR2.043 billion) purchase covers the aircraft, engines, a simulator,

and support services. This new order will increase Spain's Eurofighter fleet to 90, with deliveries set to begin in 2026 and continue until 2030. Further, in December 2024, Spain approved an order for 25 Eurofighter Typhoon fourth-generation fighter jets under its Halcon II programme. The order includes the acquisition of 21 single-seat and 4 twin-seat aircraft. Deliveries to the Spanish Air and Space Force are scheduled between 2030 and 2035, replacing the Air Force's Boeing EF-18 Hornet fighters, which are due to retire in 2030. This agreement will increase the Spanish Eurofighter fleet to 115 aircraft.

Spain is expected to spend around US$3 billion on this procurement between 2025 and 2030.

TURKEY

FOURTH/4.5TH GENERATION: F-16V

In January 2024, the U.S. approved a foreign military sales package for Turkey worth US$23 billion that included 40 F-16 Block fighters, 79 modernization kits, and other equipment. However, Turkey revised this amount to about US$7 billion after removing the 79 modernisation kits and opting to upgrade domestically using TAI capabilities.

Turkey was expelled from the U.S.-led F-35 fighter jet programme in July 2019 due to its controversial purchase of the Russian S-400 missile defence system. The current F-16 procurement programme aims to fill the gap left by the F-35s. Additionally, Turkey is developing its own national combat aircraft, KAAN, which completed its first flight in February 2024.

The country is expected to receive the new F-16s by 2032, with an estimated US$5.2 billion to be spent on this programme between 2025 and 2030.

FIFTH GENERATION: TF-X/TAI KAAN STEALTH FIGHTER

Turkish Aerospace Industries (TAI) is leading a programme known as the TF-X or TAI Kaan, which involves the development of a fifth-generation stealth combat fighter for the country's Air Force. The planned aircraft are expected to remain in service until 2070, replacing the current fleet of F-16 fighter jets.

Although the programme was announced by the government in 2010, TAI was officially tasked with exploring feasibility and building prototypes only in 2015. In January 2017, BAE Systems and TAI signed a deal worth over US$137 million (GBP100 million) to collaborate on the project. The Turkish government allocated an initial investment of US$1.178 billion (4.817 billion liras) for the conceptual design phase of the TF-X programme.

The details of the aircraft's performance and capabilities, including its level of stealth, are not fully disclosed. However, it is anticipated that the fifth-generation fighter will feature a stealth fuselage made of advanced carbon composites to reduce radar signature. Its primary role is to meet air-to-air combat requirements, but its streamlined design and unique features will allow it to be used for air-to-surface roles as well. The fighter aircraft will provide a high level of situational awareness, advanced weapon systems, sensor fusion techniques, and low observability.

The preliminary design phase of the TAI TF-X aircraft ended in December 2017. In March 2023, the first prototype of the warplane was revealed following a series of taxi tests. The jet had its maiden flight in February 2024 and conducted its second test flight in May 2024. Turkey aims to deliver the first 20 Block-10 units by 2028, with serial deliveries expected afterwards.

The country is estimated to spend around US$5.4 billion on this programme between 2025 and 2030.

FIFTH GENERATION: F-35 RENEGOTIATION

At the NATO summit in The Hague in June 2025, Turkish President Recep Tayyip Erdogan announced the resumption of technical-level discussions with the U.S. regarding Turkey's re-entry into the F-35 program. This development marks a significant step in mending defence ties between the two NATO allies after Turkey's removal from the programme in 2019. President Erdogan highlighted Turkey's commitment to the F-35, emphasising its prior investment of around US$1.4 billion in the programme before its exclusion.

Turkey's 2019 removal stemmed from U.S. concerns over Ankara's acquisition of Russian S-400 air defence systems, which were viewed as a potential threat to the F-35's stealth capabilities. However, during the summit, Erdogan described the S-400 issue as "closed," while U.S. President Donald Trump reportedly indicated that F-35 sales could resume if Turkey disables its S-400 batteries. This indicates

a potential plan for overcoming the long-standing deadlock.

Prior to its exclusion, Turkish defence companies such as Turkish Aerospace Industries (TAI) and Aselsan played a vital role in F-35 production, manufacturing more than 900 components. Reviving this industrial partnership would bolster Turkey's economy and its defence sector. The technological transfer from F-35 production could further advance Turkey's indigenous defence projects, such as the TF-X/Kaan, a next-generation fighter jet designed to secure Turkey's defence autonomy.

Strategically, with tensions in Eastern Europe and the Middle East intensifying, integrating Turkey back into the F-35 framework could enhance NATO's collective airpower and ensure a more unified defence posture. While challenges remain, including reconciling the S-400 issue and rebuilding trust, Turkey's re-entry into the F-35 programme could enhance U.S.-Turkey relations and NATO's broader strategic cohesion.

UK

FIFTH GENERATION: F-35B

The UK has been a key partner in the F-35 programme since its inception, playing a significant role in both its development and procurement. In 2012, the UK MoD signed an agreement with Lockheed Martin to purchase 48 F-35B fighter jets, with an option for an additional 90 aircraft. The F-35B, a short take-off and vertical landing (STOVL) variant, is uniquely suited for operations from the Royal Navy's aircraft carriers and RAF land bases.

The UK's involvement in the F-35 programme has also delivered substantial industrial benefits. British companies have contributed to the design, development, and production of various aircraft components, creating and supporting over 20,000 jobs across the country. This partnership has bolstered the UK's manufacturing sector while enhancing its defence capabilities.

By 2021, the UK received its first operational squadron of F-35Bs, which have since been deployed in missions, including operations against ISIS in the Middle East. As of December 2024, the UK has received 37 F-35Bs, with the remaining 11 scheduled for delivery by 2025. Additionally, tranche 2 of the programme will see the delivery of 27 more F-35Bs between 2026 and 2033.

In June 2025, the UK MoD announced the procurement of 12 F-35A stealth fighters. Unlike the F-35B, these aircraft are capable of carrying B61 tactical nuclear weapons and will fulfil NATO's Dual Capable Aircraft (DCA) mission. This marks the largest expansion of the UK's air-launched nuclear deterrent capability since the Tornado-WE177 era. The decision to select F-35As rather than F-35Bs in this tranche saves taxpayers up to 25% per aircraft.

The F-35A fleet will be based at RAF Marham, complementing the existing F-35B fleet. The UK plans to operate a total of 138 F-35 aircraft over the program's lifespan, with US$4 billion allocated for the programme between 2025 and 2030.

LOYAL WINGMAN

The Loyal Wingman programme is a vital part of the UK's plan to improve its future combat air power. This project aims to develop uncrewed aerial vehicles (UAVs) to operate alongside crewed fighter jets, such as the F-35 and the upcoming Tempest aircraft. These advanced drones are intended to assist in missions like reconnaissance, electronic warfare, and direct combat, thereby enhancing the effectiveness and survivability of crewed aircraft.

In July 2022, the UK MoD awarded a contract to Spirit AeroSystems to develop a prototype UAV under the "Lightweight Affordable Novel Combat Aircraft" (LANCA) programme, as part of Project Mosquito. This initiative aims to deliver low-cost, high-performance UAVs with advanced AI integration. However, in January 2023, the MoD revised its strategy for Project Mosquito, opting to integrate Loyal Wingman concepts into the broader Future Combat Air System (FCAS) programme. This shift allows for a more modular and scalable approach to UAV development.

In October 2023, BAE Systems, in collaboration with the Royal Air Force's Rapid Capabilities Office (RCO), unveiled a new Loyal Wingman demonstrator equipped with AI for autonomous operations, such as target identification and cooperative engagement with crewed aircraft. By March 2024, Rolls-Royce announced its development of advanced propulsion systems for these UAVs, focusing on high efficiency and affordability. In June 2024, it was revealed that the Loyal Wingman UAVs are being designed to integrate smoothly with the Tempest, enabling the creation of a "combat cloud" where crewed and uncrewed systems work collaboratively, sharing data and improving mission effectiveness. Over the forecast period of 2025-2030, the UK is estimated to spend around US$275 million on this loyal wingman drone initiative.

LATIN AMERICA

Latin America's fighter aircraft market is on a steady rise, projected to reach US$6.3 billion between 2025 and 2030 cumulatively. Brazil dominates the region's defence landscape, accounting for 62% of the total market value, followed by Colombia and Argentina. As regional powers modernise their ageing fleets, the Gripen NG and F-16 platforms have emerged as central to their strategic ambitions.

Brazil leads with its long-term F-X2 program, centred on the acquisition of 49 Gripen NG (F-39) fighters from Sweden's Saab. This programme includes significant technology transfer and domestic assembly by Embraer, positioning Brazil as a future leader in the aerospace industry. A final assembly line has already been established in São Paulo, with around 15 aircraft to be built locally. Despite initial budget cuts, Brazil now plans to expand the fleet to 70 units by 2035, underscoring its commitment to both operational readiness and indigenous capability development.

Colombia, after abandoning a deal for French Rafales, selected the Saab Gripen E/F in April 2025. Its planned procurement of up to 24 jets, with local industrial collaboration, reflects growing regional interest in co-development and operational sovereignty.

Argentina, in turn, opted for a pragmatic solution by acquiring 24 second-hand F-16s from Denmark, backed by U.S. Foreign Military Sales. This acquisition—worth US$300 million—aligns Buenos Aires with Western suppliers while addressing urgent capability gaps.

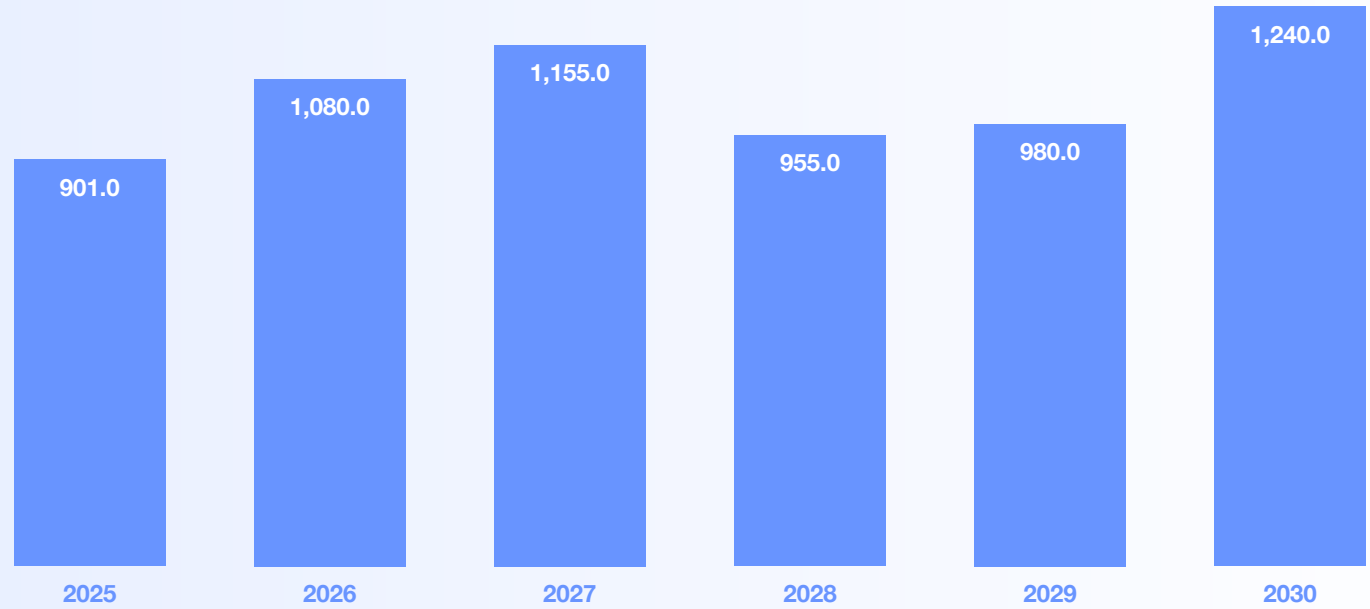
The market is expected to grow from US$901 million in 2025 to US$1.2 billion in 2030 at a CAGR of 6.6% between 2025 and 2030.

FIGHTER AIRCRAFT MARKETS IN LATIN AMERICA 2025-2030, US$ MILLIONS

Table 5: Fighter Aircraft Markets in Latin America (Selected Countries) 2025-2030, US$ Millions

Fighter Aircraft	2025	2026	2027	2028	2029	2030	Total
Fourth /4.5th Generation	901.0	1,080.0	1,155.0	955.0	980.0	1,240.0	6,311.0
Total	**901.0**	**1,080.0**	**1,155.0**	**955.0**	**980.0**	**1,240.0**	**6,311.0**

Figure 5: Fighter Aircraft Markets, Latin America (Selected Countries), 2025-2030, US$ Millions



ARGENTINA

FOURTH/4.5TH GENERATION: F-16

In April 2024, Argentina signed a US$300 million agreement with Denmark for the procurement of 24 F-16 fighter aircraft. This includes 16 F-16A/Ms and 8 F-16B/Ms, initially operated by the Royal Danish Air Force. The decision came after an extensive evaluation process involving competing platforms, such as the Chinese-Pakistani JF-17, India's HAL Tejas, and Russia's MiG-35. Ultimately, the F-16 was chosen not only for its proven combat record but also due to strategic considerations that aligned Argentina with the U.S., which had to authorise the third-party sale of the American-origin platform.

The first airframe, a non-operational F-16BM designated for ground training, arrived in Argentina in December 2024 and was officially unveiled at Tandil Air Base in February 2025. The initial batch of operational F-16s is expected to come by the end of 2025, with phased deliveries continuing through 2028.

To support this transfer, the U.S. government has backed a Foreign Military Sales (FMS) contract with Lockheed Martin valued at up to US$266 million. Awarded in March 2025, the contract covers modernisation efforts including software updates, simulator integration, pilot training, logistics support, and the establishment of long-term sustainment infrastructure for the Argentine Air Force. Lockheed Martin will carry out the work across the U.S., Denmark, and Argentina, with a planned completion date in 2032.

BRAZIL

FOURTH/4.5TH GENERATION: GRIPEN NG FIGHTER AIRCRAFT-F-39E

In 2014, the Brazilian government signed a US$4.7 billion deal with Swedish defence company Saab to buy 36 Gripen NG fighter jets, known in Brazil as the F-39, under the F-X2 program. The order includes 28 single-seat F-39E and 8 twin-seat F-39F aircraft. A key part of the agreement was a technology transfer and industrial cooperation deal with Embraer, Brazil's aerospace company. The goal was to boost Brazil's defence industry by allowing local assembly, systems integration, and future co-development of the aircraft. Brazil also ordered four more Gripens in April 2022.

In May 2023, Saab and Embraer opened a Gripen final assembly line at Gavião Peixoto in São Paulo. Out of the first 36 jets, 15 will be built in Brazil. By mid-2025, the Brazilian Air Force (FAB) had received at least 10 aircraft, with deliveries expected to continue until 2027.

Brazil had originally planned to buy about 100 Gripens, however, budget constraints forced it to scale back. However, the programme has recently picked up momentum. In November 2024, Brazil and Sweden signed a Letter of Intent (LoI) to increase the current order by about 25%, growing the fleet from 36 to at least 45 aircraft.

In the long run, Brazil still aims to operate at least 70 Gripens. A new order for 20 to 25 additional aircraft is expected by 2028, with final deliveries likely by 2035.

Meanwhile, in October 2024, the U.S. Department of Justice asked Saab North America for information about the original 2014 contract. Saab has confirmed it is cooperating, and investigations in both Brazil and Sweden have so far found no signs of wrongdoing.

The total expected cost of the F-X2 programme is now estimated at US$8.5 billion, with around US$3.3 billion planned to be spent between 2025 and 2030.

FOURTH/4.5TH GENERATION: F-16

The Brazilian Air Force (FAB) is evaluating the purchase of up to 24 used F-16 Fighting Falcon jets from the U.S. as a short-term solution to maintain its air defence capabilities. With the aging F-5 and AMX fleets scheduled for retirement between 2025 and 2029, and full deployment of the F-39 Gripen still several years away, the F-16s are seen as a cost-effective interim option.

Discussions are reportedly in early stages, with no formal contract signed as of mid-2025. However, defence officials expect negotiations to progress by late 2025. The aircraft under consideration are likely F-16C/D Block variants, sourced from U.S. surplus stocks. Estimated costs for acquisition, refurbishment, and operational integration

could range between US$400 million and US$600 million, depending on the final configuration and support package.

FAB has clarified that this procurement would not replace the ongoing Gripen programme but rather complement it by sustaining operational readiness during the transition. The move follows Argentina's successful deal for 24 used F-16s, reinforcing a regional trend toward leveraging proven Western platforms. If approved, deliveries could begin as early as 2026, which will help Brazil maintain air superiority until the full Gripen fleet is operational by 2035.

COLOMBIA

FOURTH/4.5TH GENERATION: FIGHTER AIRCRAFT

In April 2025, Colombia selected the Saab JAS 39 Gripen E/F to replace its ageing IAI Kfir fighters after years of evaluation. The selection process follows a competitive evaluation process in which the French Rafale, American F-16, and Swedish Gripen were shortlisted.

In December 2022, Colombia announced plans to buy 16 Rafale jets and secured US$678 million for the first batch. However, the manufacturers were not interested in a preliminary order and instead wanted a deal for the full 16 aircraft. As a result, the first order could not be finalised before the original budget expired on December 31, 2022. Following this, Saab then rejoined the competition, working with Colombian defence firms like CIAC, Indumil, and Codaltec. In April 2025, President Gustavo Petro confirmed the choice of the Gripen, and a Letter of Intent (LoI) was signed with Sweden.

While the final contract is pending, Colombia is expected to acquire 16 to 24 aircraft, a mix of single-seat Gripen Es and twin-seat Gripen Fs. Deliveries are expected to begin in 2026, with full deployment by 2030-2031. The programme is estimated to cost US$2.2 to US$3 billion.

MIDDLE EAST

The Middle East's (Israel, Saudi Arabia, and the UAE) fighter aircraft market is projected to reach a cumulative value of US$26.7 billion between 2025 and 2030. The UAE leads regional spending with over US$14.9 billion, followed by Saudi Arabia (US$6.8 billion) and Israel (US$5 billion). As regional powers pursue air superiority and technological self-reliance, fourth and fifth-generation platforms dominate procurement plans.

The UAE is making significant strides with its US$19 billion deal to acquire 80 Dassault Rafale F4 fighters, marking one of the largest Rafale exports to date. Simultaneously, the country is investing in indigenous capability through the B-250 light attack aircraft, developed by Calidus Aerospace. Additionally, the UAE is exploring the future procurement of South Korea's KF-21 Boramae to diversify its portfolio beyond traditional Western suppliers.

Israel's airpower strategy remains U.S.-centric but customised. It recently signed a US$5.2 billion deal for 25 advanced F-15IA jets, tailored for long-range strike missions and integrated with Israeli systems. This complements its ongoing F-35I "Adir" program, with 75 stealth fighters planned by 2032.

Saudi Arabia, while contending with past export restrictions, is reviving interest in acquiring 48 Eurofighter Typhoons and is in advanced talks with Turkey for up to 100 KAAN fifth-generation fighters in an ambitious move tied to local assembly and Vision 2030 goals.

Overall, the Middle East market reflects a blend of high-end imports, indigenous development, and shifting alliances as regional players seek greater autonomy and technological edge in a volatile geopolitical environment. The market is expected to grow from US$2.9 billion in 2025 to US$5.8 billion in 2030 at a CAGR of 14.5% between 2025 and 2030.

FIGHTER AIRCRAFT MARKETS IN THE MIDDLE EAST, 2025-2030, US$ MILLIONS

Table 6: Fighter Aircraft Markets in Middle East (Selected Countries) 2025-2030, US$ Millions

Fighter Aircraft	2025	2026	2027	2028	2029	2030	Total
Fifth Generation	500.0	600.0	400.0	400.0	400.0	500.0	2,800.0
Fourth /4.5th Generation	2,420.0	3,300.0	3,600.0	4,400.0	4,900.0	5,250.0	23,870.0
Total	**2,920.0**	**3,900.0**	**4,000.0**	**4,800.0**	**5,300.0**	**5,750.0**	**26,670.0**

Figure 6: Fighter Aircraft Markets, Middle East (Selected Countries), 2025-2030, US$ Millions

ISRAEL

FOURTH/4.5TH GENERATION: F-15IA

In November 2024, Israel signed a US$5.2 billion contract with Boeing to buy 25 F-15IA (Israel Advanced) fighter jets. The F-15IA is a customised version of the F-15EX Advanced Eagle, designed to meet the Israeli Air Force (IAF) needs. The jet features advanced avionics, a longer range, and a larger weapons payload. These capabilities make it suitable for deep-strike missions, including potential operations against heavily fortified targets like those in Iran. The jets will also include Israeli-made systems, continuing the IAF's practice of customising foreign aircraft.

Deliveries will start in 2031, with 4 to 6 jets arriving each year. At the same time, Israel will upgrade its 25 older F-15I "Ra'am" jets to the F-15IA+ standard, ensuring consistency across its fleet.

The deal is funded by U.S. Foreign Military Financing. Once operational, the F-15IA jets will work alongside Israel's F-35I Adir stealth fighters. Between 2025 and 2030, the Israeli MoD is expected to spend around US$2.2 billion on this procurement program.

FIFTH GENERATION: F-35

On 11 October 2010, Israel's Ministry of Defence agreed to buy 19 F-35 fighter jets from Lockheed Martin for US$2.8 billion. This was followed by an additional 14 jets ordered in October 2014 and 17 more in February 2017, bringing the total to 50 aircraft. The first two F-35s, known as "Adir" in Israel, arrived in December 2016. By April 2025, Israel had received 45 jets, with the planned 50 jets expected to be completed by early 2026. This made Israel the second country after the US to operate F-35s and the only one in the Middle East.

In July 2023, Israel announced plans to purchase 25 more F-35s, increasing its fleet to 75 aircraft. As a result, in June 2024, the country signed a US$3 billion deal with Lockheed Martin to acquire 25 F-35s. Deliveries are due to start in 2028, with 3 to 5 planes arriving each year, and will be completed by 2032.

SAUDI ARABIA

Saudi Arabia's procurement strategy showcases a multifaceted modernisation drive, aimed at sustaining legacy platforms through F-15ex upgrades, exploring stealth dominance via F-35 or KAAN, and enhancing Western interoperability with Rafale/Typhoon. Despite no finalised contracts yet for its most ambitious goals, Riyadh remains committed to balancing Western alliances with regional autonomy. The country is likely to acquire either Typhoon or KAAN for its fighter jet arsenal.

ANTICIPATED: FOURTH/4.5TH GENERATION: EUROFIGHTER TYPHOONS

In 2006, the Kingdom of Saudi Arabia (KSA) signed a deal to acquire 72 Eurofighter Typhoon jets, becoming one of the largest customers of the aircraft. In March 2018, KSA and the UK signed a Memorandum of Intent (MoI) for an additional 48 Typhoon aircraft. BAE Systems, the lead OEM, agreed to supply these jets in a deal valued at approximately US$13.3 billion (GBP 10 billion). However, the agreement faced significant setbacks after Germany imposed an arms export ban on Saudi Arabia in October 2018 following the murder of journalist Jamal Khashoggi. This ban disrupted the delivery of key components jointly manufactured by Eurofighter consortium nations.

Further complications arose in June 2019, when the UK Court of Appeal ruled that the British government had failed to properly assess the risk of civilian harm from Saudi-led airstrikes in Yemen, leading to a temporary suspension of arms sales to KSA.

Despite these challenges, the Eurofighter deal appears to be gaining momentum again. Germany softened its stance in late 2022, and Chancellor Olaf Scholz approved limited arms exports, including a US$39 million package covering parts and munitions for Eurofighter and Tornado aircraft. As of 2025, the deal for the 48 Typhoons remains pending, but if finalised, Saudi Arabia will spend approximately US$6.8 billion between 2025 and 2030 on this program.

ANTICIPATED: FIFTH GENERATION: KAAN

Saudi Arabia is reportedly in advanced discussions with Turkey to procure up to 100 KAAN fifth-generation stealth fighter jets, marking a potential shift in the Kingdom's airpower strategy. The Turkish-made KAAN, developed by Turkish Aerospace Industries (TAI), made its first flight in February 2024 and is seen as Ankara's ambitious bid to join the elite club of stealth aircraft producers. The proposed deal includes technology transfer, local assembly, and joint development, aligning with Riyadh's Vision 2030 goals to boost domestic defence production and reduce reliance on Western suppliers.

While no formal contract has been signed as of mid-2025, negotiations have intensified, with both nations exploring strategic defence partnerships. If finalized, this would make Saudi Arabia the first international customer of the KAAN and a key partner in its development.

UAE

FOURTH/4.5TH GENERATION: RAFALE

In December 2021, the United Arab Emirates (UAE) executed a contract valued at US$19 billion for the procurement of 80 Rafale fighter jets produced by France and 12 H225 helicopters manufactured by Airbus. The agreement was formalised through the signing by French President Emmanuel Macron and Abu Dhabi Crown Prince Sheikh Mohammed bin Zayed Al Nahyan (MBZ) during President Macron's two-day official visit to the Gulf region.

The deal involves acquiring the latest F4 variant of Rafale between 2025 and 2031. The first Rafale was delivered in January 2025, marking the UAE's shift to an advanced, Western-made 4.5-generation fleet. The F4 variant includes upgraded radar sensors, front-sector optronics, improved helmet-mounted display capabilities, and a new engine control unit. The fighter jets will be equipped with new armaments, including MBDA's Mica NG air-to-air missiles, the 1,000-kilogram AASM (Armament Air-Sol Modulaire) air-to-ground modular weapon, and can transport the new SCALP (Systeme de Croisiere conventionnel Autonome a Longue portee Precis) cruise missiles. The UAE is expected to spend around US$14.8 billion on this procurement between 2025 and 2030.

FOURTH/4.5TH GENERATION: B-250 LCA

At the Dubai Airshow in November 2019, the United Arab Air Force and Air Defence (UAEAF&AD) placed an order for the B-250 light attack aircraft, a product developed locally by Calidus Aerospace in Abu Dhabi. The deal, worth US$620 million (AED 2.273 billion), enables the Emirates to acquire 24 aircraft by 2025. The B-250 is a turboprop light attack aircraft designed for close air support, counter-terrorism operations, training, and intelligence, surveillance, and reconnaissance missions. Fitted with the PW127C engine from Pratt & Whitney Canada, the aircraft can fly at an altitude of 30,000ft to evade enemy air defences and man-portable air defence systems (MANPADS).

ANTICIPATED: FOURTH/4.5TH GENERATION: KF-21

The UAE is exploring a strategic partnership with South Korea to potentially procure the KF-21 Boramae, a next-generation 4.5++ generation stealth-capable fighter jet developed by Korea Aerospace Industries (KAI). In April 2025, the UAE signed a Letter of Intent (LoI) with South Korea, signalling its interest in observing the KF-21's flight testing, production process, and long-term operational viability.

While no formal procurement has been announced yet, the agreement includes technical exchanges, facility visits, and joint evaluation, placing the UAE as a potential early export customer once the KF-21 enters full-rate production post-2026. The move aligns with the UAE's broader strategy to diversify its fighter jet fleet and reduce dependence on Western suppliers, especially amid stalled negotiations over the U.S. F-35 deal.

NORTH AMERICA

North America's fighter aircraft market is expected to reach nearly US$111.5 billion between 2025 and 2030, predominantly driven by U.S. programmes, which represent over 94% of the total. While Canada is making strategic investments, notably through its Future Fighter Capability Project to acquire 88 F-35As, the U.S. leads with extensive, multi-layered modernisation efforts.

The U.S. continues to acquire F-35 Joint Strike Fighters across all three military branches, with over 2,400 units planned to replace ageing F-16s, A-10s, F/A-18s, and AV-8 B Harriers. Additionally, the U.S. Air Force is purchasing 90 F-15EX fighters and maintaining F/A-18E/F production for the Navy, although deliveries have been reduced due to rising costs and changing priorities.

The U.S. is strategically shifting its focus to sixth-generation platforms. The Air Force's F-47 (formerly NGAD) is designed to replace the F-22 with a crewed stealth fighter that incorporates AI-enabled drones, advanced sensors, and adaptive propulsion. The Navy's equivalent, the F/A-XX, envisions a carrier-capable sixth-gen fighter but faces delays due to internal funding battles and changing Pentagon priorities.

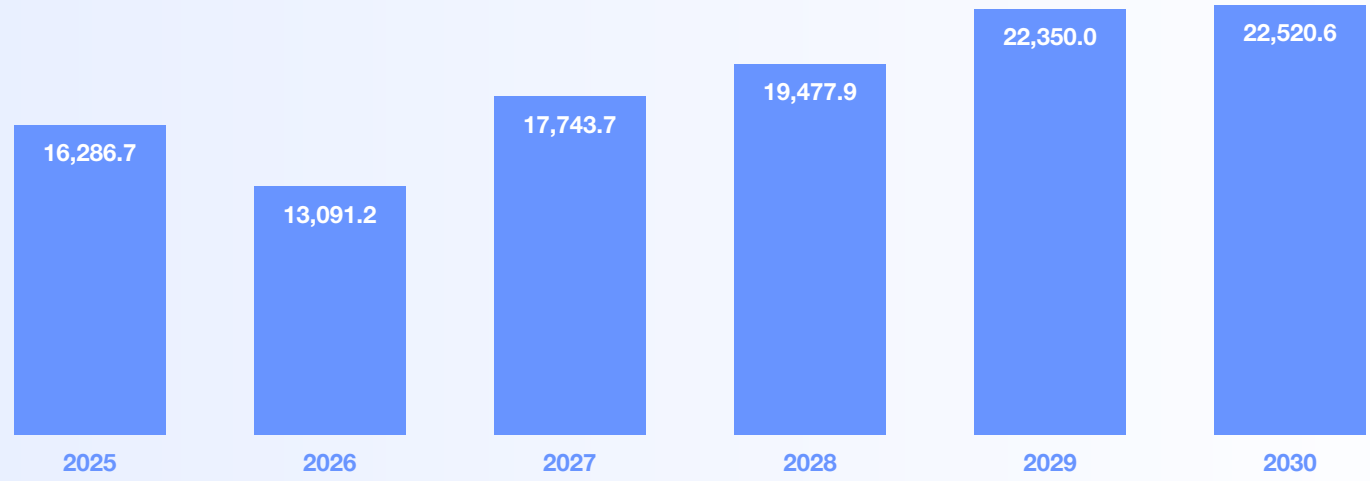
Despite these high ambitions, the sector faces limitations due to budget caps and increasing expenses. The Fiscal Responsibility Act of 2023 led the Pentagon to reduce or postpone several programs. Decreases in F-35 orders and uncertainties surrounding sixth-generation projects underscore the challenge of maintaining technological leadership while adhering to budget constraints. The market is projected to grow from US$16.3 billion in 2025 to US$22.5 billion in 2030, with a CAGR of 6.7% over this period.

FIGHTER AIRCRAFT MARKETS IN NORTH AMERICA, 2025-2030, US$ MILLIONS

Table 7: Fighter Aircraft Markets in North America 2025-2030, US$ Millions

Fighter Aircraft	2025	2026	2027	2028	2029	2030	Total
Sixth Generation	2,749.2	3,263.3	3,741.9	4,201.4	5,723.1	5,800.0	25,478.9
Fifth Generation	10,625.5	9,341.0	12,029.0	12,224.6	13,515.0	13,515.0	71,250.2
Fourth /4.5th Generation	2,200.3	375.5	318.2	5.6	5.6	5.6	2,910.7
Loyal Wingman	711.7	111.4	1,654.6	3,046.3	3,106.3	3,200.0	11,830.3
Total	**16,286.7**	**13,091.2**	**17,743.7**	**19,477.9**	**22,350.0**	**22,520.6**	**111,470.1**

Figure 7: Fighter Aircraft Markets, North America, 2025-2030, US$ Millions



U.S.

SIXTH GENERATION FIGHTER AIRCRAFT

In 2015, the Pentagon announced plans for the Aerospace Innovation Initiative (AII), a DARPA-led programme aimed at producing a semi-joint air platform prototype to replace the Air Force's F-22 and Navy's F/A-18 with a next-generation fighter. The U.S. Air Force (USAF) and the U.S. Navy (USN) have since separated their development analyses for their respective fighter replacement programmes. However, it is expected that the platforms will share some component commonalities.

SIXTH GENERATION: F-47 (FORMERLY NEXT GENERATION AIR DOMINANCE (NGAD) – AIR FORCE

In April 2025, the U.S. officially introduced its new stealth fighter, the F-47, a rebranded version of the Next Generation Air Dominance (NGAD) initiative. Intended to replace more than 180 ageing F-22 Raptors by 2030, the F-47 marks a vital move towards maintaining American air dominance in the 21st century. As a sixth-generation aircraft, it will be part of a broader "family of systems" that combines crewed and uncrewed platforms, advanced sensors, stealth features, and innovative propulsion technology.

The F-47's origins trace back to 2015 under DARPA's Penetrating Counter-Air initiative. The project gained momentum in 2020 when the U.S. Air Force (USAF) confirmed a successful flight of a full-scale demonstrator. By mid-2022, the F-47 (NGAD) programme had entered the engineering, manufacturing, and design (EMD) phase. While exact specifications remain classified, it is confirmed that the F-47 will be a crewed stealth fighter capable of seamlessly coordinating with autonomous drones, reinventing the concept of air dominance.

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In March 2025, the U.S. Department of Defence (DoD) awarded Boeing the contract for the F-47's EMD phase. This cost-plus-incentive agreement entrusts Boeing with integrating, testing, and producing prototype aircraft, with options for limited production based on performance and cost-effectiveness.

Core Technology:

The F-47 is built on four core technological pillars:

- **Propulsion:** The Next-Generation Adaptive Propulsion (NGAP) initiative underpins the F-47's engine development. With partners including GE Aerospace, Pratt & Whitney, and Lockheed Martin, the propulsion system is being digitally designed from the start in a 3D environment.
- **Advanced Materials:** The programme integrates new composite materials with radar-absorbing capabilities, significantly reducing the aircraft's radar cross-section while enhancing payload capacity. These materials reportedly absorb over 80% of radar waves without compromising structural performance.
- **Sensors:** The F-47 features next-gen radar, infrared sensors, and electro-optical systems. Data fusion and AI-driven interpretation will enable pilots to engage in highly dynamic combat environments with reduced cognitive burden. Its electronic warfare suite provides full-spectrum threat detection and neutralization capabilities.
- **Uncrewed systems:** Parallel development is underway for uncrewed aircraft that will serve as loyal wingmen, supporting the F-47 with roles such as surveillance, electronic warfare, and strike capabilities. Although exact deployment strategies remain undisclosed, this initiative is central to the program's modular and scalable architecture.

Current Status:

In 2020, the USAF announced the successful flight of a full-scale demonstrator, marking a significant step in the development of sixth-generation air combat capabilities. By 2022, the programme had officially entered the Engineering, Manufacturing, and Design (EMD) phase, signifying its transition from concept to production readiness. In 2023, Pratt & Whitney achieved a major engine design milestone, further advancing the propulsion system that will power the F-47. The following year, in 2024, the U.S. and Japan began collaborative research under the Cooperative Research and Development Agreement (CRADA) to explore AI-driven autonomous aircraft technologies.

Although there were initial worries about the program's expense, with early estimates suggesting costs could be around three times those of an F-35, the project continued following a short strategic review in 2024. In March 2025, the F-47 designation was officially adopted, and Boeing secured the EMD contract to oversee the development and integration of the new crewed fighter platform.

Although there were initial worries about the program's expense, with early estimates suggesting costs could be around three times those of an F-35, the project continued following a short strategic review in 2024. In March 2025, the F-47 designation was officially adopted, and Boeing secured the EMD contract to oversee the development and integration of the new manned fighter platform.

Budget and Funding:

Between fiscal years 2022 and 2024, the U.S. Congress allocated approximately US$5.1 billion toward the development of the F-47 (NGAD) program. In FY2025, the Biden Administration requested an additional US$2.75 billion to continue advancing the program, with funding projections expected to rise to US$5.72 billion by FY2029.

The overall budget is broadly categorized into two key components. The first is Air Dominance Technologies (ADT), which is allocated a total of US$25.4 billion through 2030. This segment supports the development of technologies aimed at enhancing survivability, lethality, and interoperability across multiple operational domains. The second component is Collaborative Combat Aircraft (CCA), which focuses on developing autonomous uncrewed systems, commonly referred to as "loyal wingmen." In FY 2025, the CCA funding was transferred to a separate programme in order to align with Congressional intent to separate CCA from the F-47.

These platforms are designed to operate alongside the crewed F-47 fighter, expanding the Air Force's capacity for uncrewed aerial warfare, electronic attack, reconnaissance, and strike missions. Together, these funding streams support a comprehensive strategy to ensure U.S. air superiority well into the next decade.

Lead Contractors and Suppliers:

The F-47 programme initially involved all three major U.S. defence contractors, including Lockheed Martin, Boeing, and Northrop Grumman. However, in July 2023, Northrop Grumman withdrew from the prime contractor race, leaving Boeing and Lockheed Martin as the primary competitors. As of March 2025, Boeing emerged as the lead EMD contractor. Under this contract, Boeing will develop, integrate, and test all components of the F-47 crewed fighter, and it will manufacture a few test aircraft. The contract also includes "competitively priced" options for producing low-rate initial production models of the F-47. In the years ahead, the F-47 is expected to remain in advanced testing and limited production phases, with operational deployment projected around 2030.

COLLABORATIVE COMBAT AIRCRAFT (CCA) - LOYAL WINGMAN

The U.S. Air Force (USAF) is undertaking a programme to develop a new uncrewed weapon system, known as the Collaborative Combat Aircraft (CCA). The CCA is designed as a "loyal wingman" to fly alongside crewed fighters, such as the upcoming F-47 and existing F-35s. Powered by AI, these systems will perform various missions, including air combat and electronic warfare. This will enhance lethality and survivability while reducing costs. The Air Force plans to deploy around 1,000 CCAs, pairing two with each of its 500 advanced fighters.

With Congress approving US$771.7 million in FY2025 and US$111.4 million in FY2026, production could accelerate quickly. As AI advances, future CCAs may operate with more autonomy, prompting a reassessment of U.S. aerial tactics. Integrating these systems into dispersed, agile combat operations will be vital to counter near-peer threats and maintain air superiority.

CCA development is part of the broader sixth-generation F-47 aircraft ecosystem. In January 2024, initial contracts were awarded to five companies, with Anduril and General Atomics selected to produce test models. They are creating their own CCA prototypes, the RFQ-42A and RFQ-44A, which will serve as drone wingmen flying alongside the F-35 or F-47. These platforms aim to disrupt enemy strategies through massed aerial presence and deception.

With Congress approving US$771.7 million in FY2025 and US$111.4 million in FY2026, production could accelerate quickly. As AI advances, future CCAs may operate with more autonomy, prompting a reassessment of U.S. aerial tactics. Integrating these systems into dispersed, agile combat operations will be vital to counter near-peer threats and maintain air superiority.

SIXTH GENERATION: F/A-XX NAVY

F/A-XX is a programme aimed at developing and acquiring a sixth-generation air superiority fighter to replace the U.S. Navy's (USN) F/A-18E/F/F Super Hornet. The F/A-18s are scheduled to reach the end of their 9,000 hours of service life by the early 2030s. In addition, the F/A-XX will also work alongside the F-35C starting in the 2030s. F/A-XX is set to serve as the primary crewed fighter and core component of the Navy's F-47 (formerly Next Generation Air Dominance (NGAD)) system. It would not only complement the F-35C but also form the backbone of the Navy's segment of the F-47 (formerly NGAD) system. However, despite its technological ambition and early momentum, the programme entered a period of profound uncertainty in 2025, plagued by shifting budget priorities, inter-service competition, and political ambiguity.

Origins and Vision

The U.S. Navy began planning for a sixth-generation fighter in 2008, anticipating that emerging threats would surpass the capabilities of its current fleet. Boeing presented the first F/A-XX concept in 2009, and a formal Request for Information followed in 2012 to identify replacements for the F/A-18E/F and EA-18G. By 2013, a tailless, twin-engine stealth design had emerged, emphasising speed, stealth, and advanced electronic warfare.

An Analysis of Alternatives was launched in 2015 and concluded in 2019, setting the stage for concept development. The new F/A-XX is expected to be a versatile, supercruising fighter with both crewed and uncrewed modes, capable of operating from both Nimitz- and Ford-class carriers. The fighters will be equipped with stealth features, long-range sensors, AI-driven systems, and advanced networking. It will work alongside UCLASS drones in a coordinated crewed-uncrewed combat network.

Budget Reallocations and Strategic Priorities

Initially, the Navy took deliberate steps to reallocate funds from legacy systems to support the development of the F/A-XX. To fund the F/A-XX program, the Navy cancelled the planned purchase of 36 Super Hornets in FY2021, saving US$4.5 billion and redirecting it to next-gen fighter development. The FY2024 defence budget initially allocated US$11.8 billion through 2028, signalling strong support.

However, the Fiscal Responsibility Act of June 2023 imposed a US$895 billion defence cap, reducing the Navy and Marine Corps' share to US$257.6 billion. As a result, the F/A-XX's FY2024 budget was slashed to US$1.5 billion, with much of the funding pushed to future years, thereby delaying timelines and milestones.

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At the same time, the Pentagon began favouring the Air Force's F-47 program, awarding it increased priority and internal support. In March 2025, US$500 million was requested to be shifted from F/A-XX to F-47. A defence official confirmed that the Navy programme remains under review, with a potential three-year delay in contract decisions.

Industry Turbulence and Contract Uncertainty

The F/A-XX programme has faced growing uncertainty within the defence industry. While Boeing has led early development and Northrop Grumman showed interest in 2023, Lockheed Martin was unexpectedly dropped from the competition in March 2025, narrowing the field amid shifting priorities and budget pressures.

The FY2026 defence proposal, released in June 2025 by the Trump administration, requests just US$74 million to continue F/A-XX design work, pending a decision to move forward. Like the Constellation-class frigate, the programme is under review, reflecting both fiscal constraints and hesitation over funding two sixth-generation fighter efforts simultaneously.

The delay and downgrading of the F/A-XX programme pose serious strategic risks for the Navy. Unlike the Air Force's land-based F-47, the Navy requires a carrier-capable, rugged fighter to replace the retiring Super Hornets. Without a timely successor, the Navy faces a potential airpower gap, especially as Chinese capabilities rapidly develop.

Strategic Implications and Outlook

The delay and downgrading of the F/A-XX programme pose serious strategic risks for the Navy. Unlike the Air Force's land-based F-47, the Navy requires a carrier-capable, rugged fighter to replace the retiring Super Hornets. Without a timely successor, the Navy faces a potential airpower gap, especially as Chinese capabilities rapidly develop. It is envisioned to play a vital role in future deterrence, particularly in the Indo-Pacific. Yet, the programme remains in limbo. The programme may progress once the Navy is able to persuade Congress of F/A-XX's unique value and align its objectives with budget constraints and industrial capacity.

FIFTH GENERATION: F-35 JOINT STRIKE FIGHTER (JSF)

The F-35 Joint Strike Fighter (JSF) is the largest programme in the Department of Defence (DOD) and involves the procurement of the fifth-generation multirole aircraft. This aircraft is replacing the U.S. Air Force's ageing fleet of F-16 Fighting Falcons and A-10 Thunderbolt II's, the Navy's F/A-18s, and the Marine Corps' AV-8B Harriers and F/A-18s. The aircraft is manufactured in three variants: the F-35A Conventional Take Off and Landing (CTOL), the F-35B Short Take-Off and Vertical Landing (STOVL), and the F-35C Carrier Variant (CV).

The U.S.' procurement plan includes a total of 2,456 units, at an estimated cost of US$363.5 billion. Specifically, the U.S. Air Force is scheduled to acquire around 1,763 units at a value of US$249.2 billion. The Navy, on the other hand, plans to spend approximately US$62.1 billion on 369 units, while the Marines intend to allocate around US$52.2 billion for the acquisition of 324 units.

The F-35 Lightning II is the U.S.'s most sophisticated fifth-generation stealth fighter jet. It boasts cutting-edge stealth features, supersonic speed, sensor fusion, and networked capabilities. Built for multiple roles including air-to-air, air-to-ground, and ISR missions, the jests improve situational awareness and interoperability among allied forces. Different variants are used by the air force, navy, and marines.

The programme continues to experience delays and cost overruns due to late deliveries of engines and other parts, spread-out aircraft purchases, engine and thermal management system modernisation, and technology updates. Moreover, delays in completing the simulator have restricted the DoD from completing the testing required to demonstrate that the F-35 is ready for full-scale manufacturing, despite 125 units being produced annually. According to the Government Accountability Office (GAO), the programme's total costs have increased by US$13.4 billion as of May 2023, compared to the last estimate done in 2019.

The Pentagon's June 2025 budget request to Congress outlines plans to cut deliveries of the F-35 Lightning II across all U.S. military branches. The U.S. Air Force will receive 24 F-35As instead of the 48 initially approved last year. The U.S. Navy's F-35C deliveries are reduced from 17 to 12, and the U.S. Marine Corps will see a decrease of two jets, though it's unclear whether these are F-35 B, F-35 C, or a combination. This request likely aims to prepare for broader budget cuts suggested by U.S. Secretary of Defence Pete Hegseth.

FOURTH/4.5TH GENERATION: F-15EX

The U.S. Air Force is procuring F-15EX next-generation fighter aircraft, which is an upgraded version of the fourth-generation F-15 Eagle Mission Design Series. This procurement, which started in December 2019, has been undertaken to replace the Oregon Air National Guard's ageing fleet of F-15C/Ds. The F-15EX is a two-seater aircraft with a length of 19.45m, a width of 13.05m and a height of 18.54m. It has an empty weight of 14,500kg and a maximum take-off weight of 37,000kg. Powered by two F110-GE-129 engines, each generating a thrust of 29,000lb, the aircraft can achieve maximum speeds of Mach 2.5. Moreover, it is integrated with the Eagle Passive Active Warning and Survivability System (EPAWSS) and the F-15 Operational Flight Programme (OFP) software. Under the US$9.9 billion programme, the U.S. DoD is scheduled to procure 90 F-15EX fighter jets by the end of 2025.

FOURTH/4.5TH GENERATION: FA-18E/F

The U.S. Navy is procuring F/A-18E and F/A-18F fighter aircraft to meet its fighter escort and interdiction mission requirements and maintain fleet air defence, close air support, forward air controller, and aerial tanking roles. The E version is a single seater while the F version, which also doubles as a trainer, has twin seats. The latest version of this aircraft includes the Common Tactical Picture in the cockpit, an advanced cockpit system with large touchscreen displays, and augmented computing through the Distributed Targeting Processor Network and Tactical Targeting Network technologies. It is 60.3 feet in length, 16 feet in height, has a wingspan of 44.9 feet, and can achieve speeds up to Mach 1.8.

The latest contract in the programme, worth US$1.1 billion, was awarded to Boeing in March 2024 to procure 17 jets. It involves the acquisition of long lead material and related efforts to maintain the aircraft's full-rate production timeline. A total of US$55.5 billion has been allocated for the acquisition of 713 fighter jets by 2027.

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RMAF Air Region 2 Commander
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Major General Paul Moga
Commander, Third Air Force
U.S. Air Force

Air Vice-Marshal Shaun Harris CBE
Director Support and Chief Engineer
Royal Air Force

Agenda

Register

ABBREVIATIONS

AESA - Active Electronically Scanned Array

AII - Aerospace Innovation Initiative

ALGS - Autonomic Logistics Global Support System

ALIS - Autonomic Logistics Information System

AMCA - Advanced Medium Combat Aircraft

C2 - Command and Control

CAGR - Compound Annual Growth Rate

CCA - Collaborative Combat Aircraft

CNI - Communications, Navigation, and Identification

CRADA - Cooperative Research and Development Agreement

DARPA - Defence Advanced Research Projects Agency

DAPA - Defence Acquisition Programme Administration

DoD - Department of Defence

EMD - Engineering, Manufacturing, and Design

EPAWSS - Eagle Passive Active Warning and Survivability System

FCAS - Future Combat Air System

FFAR - Folding-Fin Aerial Rockets

FFCP - Future Fighter Capability Project

FRA - Fiscal Responsibility Act

GCAP - Global Combat Air Programme

IAF - Israeli Air Force

ISR - Intelligence, Surveillance, and Reconnaissance

ITAR - International Traffic in Arms Regulations

JADC2 - Joint All-Domain Command and Control

JAIEC - Japan Aircraft Industrial Enhancement Co., Ltd.

JSF - Joint Strike Fighter

JTT-X - Joint Tactical Terminal Transceivers

KSA - Kingdom of Saudi Arabia

LANCA - Lightweight Affordable Novel Combat Aircraft

LCA - Light Combat Aircraft

MANPADS - Man-Portable Air Defence Systems

MHI - Mitsubishi Heavy Industries

MoD - Ministry of Defence

MoI - Memorandum of Intent

MoU - Memorandum of Understanding

MOSA - Modular Open Systems Architecture

MUM-T - Manned-Unmanned Teaming (Crewed-Uncrewed Training)

NACAPR - NATO Air Capability Programme

NGAD - Next Generation Air Dominance

NGAP - Next-Generation Adaptive Propulsion

NGEAU - Next Generation Electronic Attack Units

NGF - Next Generation Fighter

OFP - Operational Flight Programme

PCA - Penetrating Counter Air

PTDI - PT Dirgantara Indonesia

RAAF - Royal Australian Air Force

RAM - Radar-Absorbing Material

RMAF - Royal Malaysian Air Force

RSAF - Republic of Singapore Air Force

RTAF - Royal Thai Air Force

STOVL - Short Take-Off and Vertical Landing

TAI - Turkish Aerospace Industries

UAV - Unmanned Aerial Vehicle

UCLASS - Unmanned Carrier-Launched Airborne Surveillance and Strike

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