Commercial Aerospace Insight Report

From resiliency to growth in commercial aerospace

December 2023

accenture

As recovery continues, executives tackle persistent challenges and pursue a new chapter of growth

Despite a host of short and mid-term concerns, our latest overview of the state of the commercial aerospace industry reveals increased overall optimism. In part, this outlook is driven by the potential of Generative AI.

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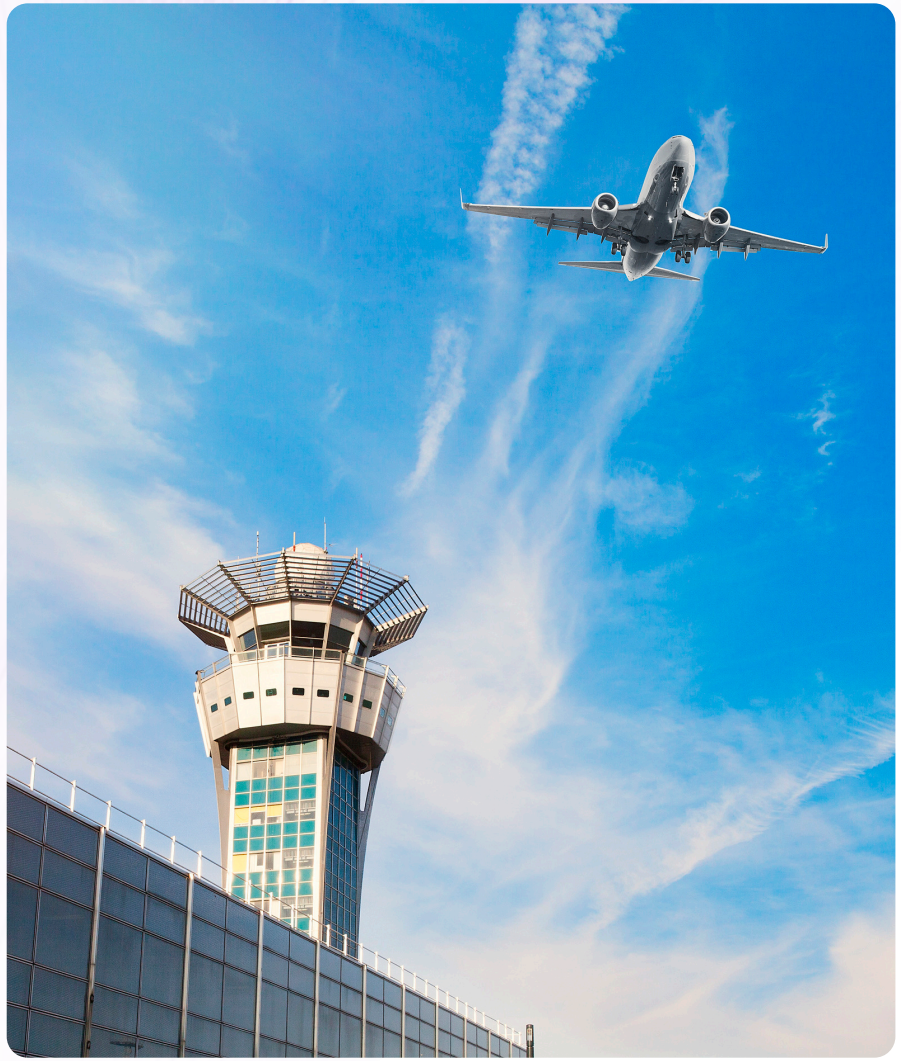


Executive summary

The November 2023 edition of our Commercial Aerospace Insight report highlights a breakthrough moment on the horizon for aerospace companies, driven by Generative AI (Gen AI). The technology, while still nascent, has the potential to become one of the key elements of the digital transformation of company functions and generate significant added value. According to our survey of industry executives, on average, 81% expect to see that transformative impact begin to occur across functions within the next three years. Almost all surveyed executives reported actions to explore this technology in their companies' functions.

This uptake is happening as the aerospace industry continues to recover, bolstered by growing demand in new aircraft sales and aftermarket services. Airlines are pushing for fleet renewal and air traffic levels continue to increase.

More executives are concerned about short-term revenues now than in our previous survey. They're influenced by factors such as protracted issues with supply chains, talent shortages in all tiers of the supply chain and persistent elevated costs. In April 2023, respondents unanimously expected revenues to increase or stay at the same level for the second half of 2023.[1] In this survey, 72% expected those results.

Nonetheless, over the longer term, there's increased optimism, with 88% expecting revenue growth in the next 24 months.

Our analysis affirms ongoing recovery and growth. In the Asia Pacific region, 2023's aerospace revenues could exceed 2019 levels by 39%, driven by a surge in maintenance, repair and operations (MRO) and a China-based production ramp-up. In North America and Europe, 2023 revenues could remain between 3% and 14% below 2019 levels due to production ramp-up challenges. But despite these issues, both regions have experienced substantial recovery and sustained growth is on the horizon.

Commercial aerospace OEMs also support this positive outlook. Airbus SE CEO Guillaume Faury, for example, has said that the company maintains its production ramp-up and expressed confidence that "there will be a steady growth on all programs".[2] Most, if not all OEMs, are pushing suppliers to demonstrate that they have the agility needed to follow through on current and future product rates. Boeing CEO Dave L. Calhoun had said that the company's production system "is poised for steady and efficient increases," but also noted that Boeing "won't push the system too fast, and we'll ensure the supply base is in lockstep with us."[3] Embraer has dispatched employees to critical suppliers around the world to boost their production levels. And Dassault Aviation has acquired a few small suppliers that were planning to exit the aerospace industry.[4] On lower-tier supplier levels, we see companies including inflation clauses to their long-term contracts with OEMs to protect themselves against increasing costs.[5]

Findings in brief

Aerospace continues recovery trend, albeit with lower expectations for aircraft deliveries

Our analysis indicates that 2023 commercial aerospace company revenues will grow to reach 11% year-over-year (YOY), bringing the industry very close to its 2019 revenue levels. And consistent with the forecast we issued six months ago, we expect revenues to reach 2019 levels mid-year 2024. This continued positive outlook is backed in part by strong growth in commercial revenue in the first nine months of 2023. Airbus revenues, for example, reached €32B, an 18% increase YOY.[6] Boeing, at $23B, achieved a 40% increase YOY.[7]

It's also supported by a maintenance, repair and overhaul (MRO) market scrambling for parts to meet growing maintenance demand. OEMs efforts to increase narrow- and wide-body production and deliveries are likely to aid market recovery in the coming months.

Notably, despite these efforts, our current survey findings indicate lower expectations for 2023 aircraft delivery. Just 50% of executives responding said they expect higher 2023 deliveries in narrow-body and 41% in wide-body segments, versus 64% and 70% respectively in April. This diminished optimism is also visible in delivery of commercial aerospace products, where only 50% anticipate 2023 deliveries of to be higher than in 2022, versus 73% in April.[8]

Airlines return to profitability

The International Air Transport Association (IATA) estimates that global airline industry net profits will reach $9.8B in 2023; that's a marked difference from the industry's losses of $7B in 2022 and $42B in 2021.[9] And industry-wide revenue-passenger-kilometers (RPKs) increased by 28% YOY in August, reaching 96% of the traffic numbers recorded in 2019. The increase was led, primarily, by domestic air traffic.[10] This recovery is particularly noteworthy given the macroeconomic conditions prevailing in 2023, including elevated fuel and energy prices, elevated inflation levels, volatile weather and a tight labor market.[11]

Generative AI breaking through in commercial aerospace business

Almost all survey respondents said their companies are exploring ways in which Gen AI can improve efficiency and enhance worker experiences across functions. 81% of our responding executives expect Gen AI to begin broadly benefiting across functions within the next three years.

More specifically, executives expect Gen AI to support faster time to market for new and updated products and services, new revenue opportunities and increased productivity across a range of processes. They expect Gen AI to deliver the most value in design and engineering, customer service and support and production and manufacturing functions. They also understand the pressing need to address AI-related concerns around ethics, trust, data governance and legality, to capture that value.

Supply chain issues persist

While supplier deliveries are becoming more reliable, supply chain issues persist. As a result, executive confidence levels continue to shift rapidly from one extreme to the other. Their sentiments reflect volatility in material availability and prices, suppliers' financial status and the availability of skilled talent.

Despite these difficulties, short-term confidence in supply chains has incrementally improved in recent months. Looking at the coming six months, in fact, 72% of executives reported confidence in their supply chain timeliness and quality. Short-term confidence has not yet returned to pre-COVID levels, when 88% of our survey respondents reported confidence in the upcoming six-month period.[12]

There is also broad optimism for the medium term, as executives express near-unanimous confidence in suppliers' ability to meet or exceed delivery expectations over the 12-month horizon.

Aftermarket on steady track to recovery

MRO recovery is expected to stay steady through 2023, primarily supported by increased passenger and freight demands. And we expect MRO growth as airlines use older aircraft to meet increased demand while supply chain, parts availability and workforce challenges persist. For example, airlines are retaining older aircraft to meet growing demand for narrow-body aircraft, leading to increased demand for cabin reconfiguration.[13] Additionally, there has been a noticeable increase in freight demand, particularly in the Asia Pacific region, and to meet this demand, we are witnessing a growing trend of passenger-to-freight (P2F) conversions.[14] Airlines are also exploring opportunities to reduce life-cycle costs for aircraft and engines through proactive repairs and replacements. To enhance savings, airlines are also considering serviceable materials and Parts Manufacturing Approval (PMA) components.[15]

Collectively, these activities are spurring mergers and acquisitions in the MRO sector, for example, to fill in portfolio gaps.[16] Recent developments encompass the acquisition of proprietary aftermarket parts manufacturers, while the prevailing theme of digitalization continues to propel merger and acquisition activities. For instance, Lufthansa Technik completed the acquisition of Swiss Aviation Software, a maintenance and engineering software provider, in late 2022. The company is in the process of seamlessly integrating this entity into its pre-existing data analytics, digital records and asset management operations. Similarly, AAR Corp. has acquired Trax USA Corp., a leading independent provider of aircraft MRO and fleet management software.[17]

However, capacity remains an ongoing challenge. A recent issue with the powder metal used in certain engine parts is prompting Pratt & Whitney to take approximately 600 to 700 PW1100 GTF engines out of service from 2023 to 2026. Additionally, this situation will necessitate the expansion of capacity to alleviate the impact on the overall number of engines affected.[18]

Interest rates, long-term economic and geo-political risks present concerns

Executives reported greater concern over interest rate changes in the shorter (six-month) time frame than they did in our previous survey, as global central banks increased interest rates to contain the biggest inflation outbreak in the four decades. However, there's no evidence yet of a significant headwind at this point, as aircraft orders continue to flow. Notably, Boeing and Airbus collectively reported 2,205 net new orders between January and September 2023, marking a 104% increase compared to the same timeframe in 2022.[19]

More broadly, our survey respondents anticipate a deteriorating geopolitical landscape and are broadly concerned about economic, political and climate change risks in the next 6 to 12 months. Their concern levels rise when they consider a two-year timeframe.*

*The commercial Aerospace Insight survey was administered prior to developments in the Middle East.

Global outlook

We expect 2023 global commercial aerospace revenues to grow 11% year-over-year (YOY), driven by continued airline traffic resurgence, an improving supply chain situation and growing demand for MRO. This should bring global aerospace industry revenue very close to its pre-pandemic levels, just 3% short of its 2019 high.

Despite protracted supply chain issues and the war in Ukraine, the industry is well positioned to continue its recovery in the second half of 2023. Our expectations of a full recovery in the coming 6–12 months is consistent with the forecast in our April 2023 report. The recovery's main drivers are the accelerating growth in production of both narrow- and wide-body segments and overall growth in commercial flights worldwide, spurring increased MRO activity.

Original equipment manufacturer (OEM) momentum from last year continues. Overall commercial deliveries increased by 13% in the first nine months of 2023 YOY,[20] and we expect a delivery increase of 7% YOY for 2023 overall.[21] In fact, healthy financial results from Airbus and Boeing in the first nine months of 2023 are contributing to expected double-digit 2023 global commercial aerospace revenue growth at the level of 11% YOY. (Airbus achieved 18% and Boeing achieved 40% YOY commercial revenue growth in the first nine months of 2023.[22]).

We expect 2023 to be the last year of the post pandemic recovery and 2024 should be the first year of higher global commercial aerospace revenue than in 2019 (figure 1).

Figure 1. Global commercial aerospace index (USD, 2018 = 100)

Airline performance

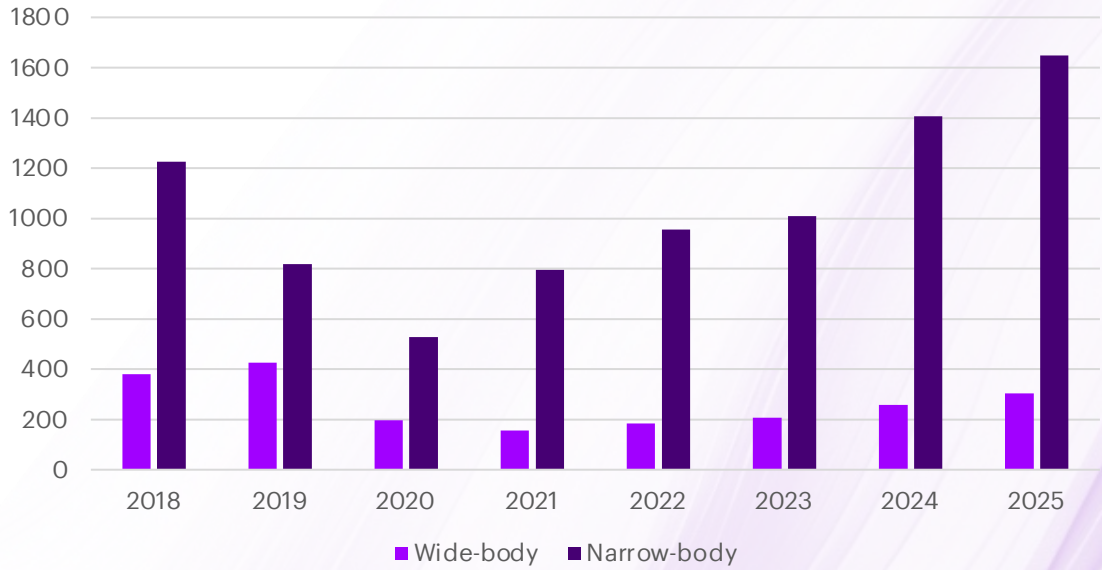
IATA estimates that the global airline industry's net profits are expected to reach $9.8 billion in 2023, compared to losses of $7B and $42B in 2022 and 2021, respectively. Total revenues are expected to grow 9.7% YOY to $803 billion.[23]

This would mark the first time that industry revenues top $800 billion since 2019 ($838 billion). Airline financial performance is expected to improve across all geographies in 2023. North American and European carriers are expected to achieve profits of $12B and $5B, respectively, while Asia-Pacific airlines should narrow losses to $7B from $14B in 2022.[24]

Air passenger traffic recovery is well underway as well, in 2023. Industry-wide, revenue passenger kilometers (RPKs) increased by 28% YOY in August, reaching 96% of the traffic numbers achieved in 2019. Domestic passenger traffic led the recovery, reaching an all-time high in August, as it rose by 9.2% above the Aug 2019 results, primarily driven by Chinese domestic demand.[25] These trends suggest industry resilience, especially given elevated inflation levels, continued global supply chain issues and ongoing problems with tight labor markets.[26]

Supporting this airline recovery, we expect that Airbus and Boeing can collectively deliver about 1220 aircraft in 2023 (their collective total in 2022 was 1141 deliveries).[27] Narrow-body aircraft should account for the bulk of deliveries with an estimated 1010, while wide-body aircraft deliveries are expected to total 207. In 2023, narrow-body and wide-body deliveries are expected to grow YOY by 6% and 12%, respectively, when compared with 2022 deliveries (figure 2). See the section on Customer Deliveries for detail.

Figure 2: Historic and expected deliveries by year (Boeing and Airbus)



Accenture narrow- and wide-body deliveries forecast (2018–2025)

Business cycle status

OEMs recorded improved results in the first nine months of 2023 in their commercial aircraft businesses. For example, Airbus and Boeing achieved 18% and 40% YOY revenue growth, respectively. Airbus' commercial aircraft business stayed profitable. Airbus' commercial aircraft business stayed profitable, though profitability decreased by 29% vs same period in 2022, and Boeing Commercial Airplanes cut its YOY loss by 4% for the same period.[28]

Both companies improved commercial YOY deliveries for the January–September period, which are up by 12% for Airbus and 13% for Boeing, to 488 and 371 planes, respectively.[29] Airbus is holding to its delivery target of 720 aircraft in 2023 with a clear focus on further production ramp-up.[30] And although Boeing has decreased its estimated narrow-body deliveries to 375–400 (down from its previous estimate of 400–450 for the calendar year), it still plans to deliver 70-80 787 wide-bodies.[31] Overall, Boeing should deliver more aircraft than it did in 2022.

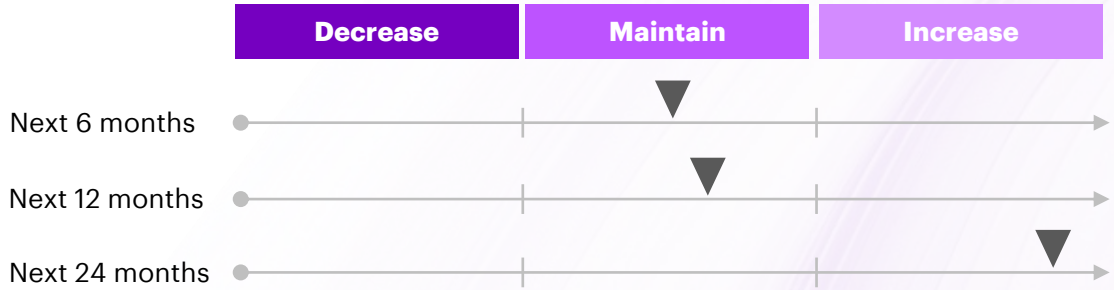
That positive outlook is reflected in our survey, with 50% of executives anticipating higher deliveries of commercial aerospace products in 2023 than in 2022.

In financial terms, however, both companies are not out of the woods yet. Boeing's free cash flow went negative again, with $-0.3B at the end of Q3 2023 versus positive $2.9B in the same period of 2022.[32] Airbus' consolidated free cash flow, meanwhile, reduced YOY by 71% to €0.7B in the first nine months of 2023 versus €2.5B in the same period of 2022.33

Net new orders, January–September 2023 soared for both companies. Airbus reached 1241 net orders, beating YOY results by 92%. And Boeing reported 965 net orders, 123% more than in the same period a year ago.[34]

Among our surveyed executives, a large majority of 81% expect their revenues to stay at the same level over the next 12 months. Even more, 88% expect revenues to increase over the coming 24-month period (figure 3).

Figure 3: Business-cycle stance (commercial aerospace revenues) outlook



Customer deliveries

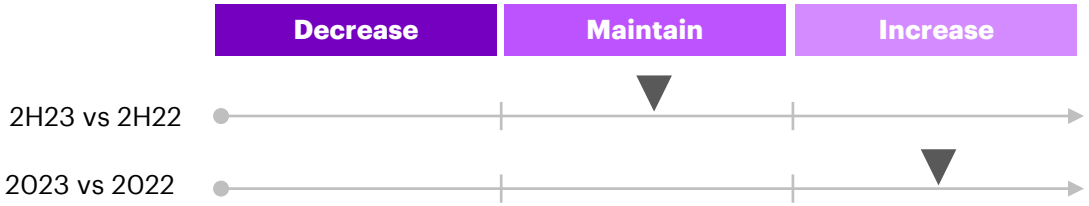
Customer deliveries improved in the first nine months of 2023 for the OEMs. Airbus and Boeing, for example, delivered 488 and 371 airplanes respectively, an increase of 12% and 13% compared to the same period of 2022. Supporting this increase: a ramp-up in production of both narrow-body and wide-body aircraft.[35]

In 2023, Boeing and Airbus are expected to deliver 1,217 commercial aircraft,[36] a higher total than in recent years. In 2022, the companies delivered 1,141 commercial aircraft; in 2021, the total was 951 and in 2020, the total was 723.

In the month of September 2023, Boeing and Airbus delivered a combined total of 82 aircraft, 23% less than they delivered in September 2022. However, over the first nine months of 2023, they delivered 859 aircraft, compared to 763 in that period in 2022, for a total 13% increase.[37] Although Airbus confirmed its commitment to deliver 720 aircraft as forecasted for 2023, some analysts are cautious about the company's ability to do so, as production does not appear to be on track to meet that goal.[38] Boeing is also struggling to ramp up production, as the company faces issues with the production of its 737 MAX fuselage (made by Spirit AeroSystems). This struggle is clear as Boeing has decided to reduce its 2023 737 deliveries forecast from 400–450 to 375–400.[39] Our analysis indicates that it will take until the end of 2024 to resolve supply chain constrains and regain pre-pandemic production levels.

More than half (56%) of executives expected commercial aerospace product deliveries to remain the same in the first half of 2023 as they were in the same period in 2022. Half of the executives in our survey expect deliveries to be higher overall in 2023 compared with 2022 (figure 4).

Figure 4: Commercial aerospace products delivery outlook



Most executives—97%—expect narrow-body deliveries to be at the same or higher levels in the second half of 2023 versus the second half of 2022. And 94% of our respondents expect wide-body deliveries to be at the same or higher levels in the second half of 2023 versus the second half of 2022.

However, they were not as positive about the overall outlook for narrow-body deliveries in 2023 as they were in April. Half of our respondents predicted a greater number of deliveries in 2023 than in 2022 in our current survey, as compared to 64% in our April survey. Similarly, for wide body, 41% of executives expect 2023 wide-body deliveries to be higher than 2022 in our current survey, down from 70% in April. Executives are less bullish now than they were six months ago about delivery outcomes for 2023 (figures 5 and 6).[40]

Figure 5: Narrow-body aircraft delivery outlook (unit deliveries shipped to customers)

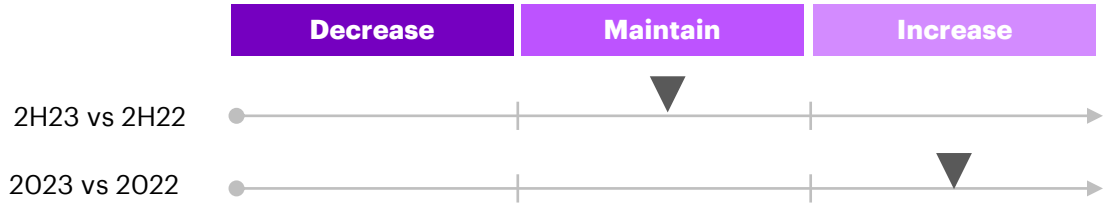
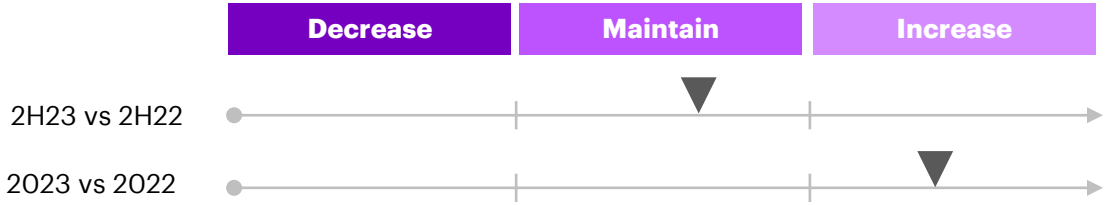


Figure 6: Wide-body aircraft delivery outlook (unit deliveries shipped to customers)



Aftermarket

MRO demands pick-up because of recovery in flight hours, especially in the narrow body and the cargo segments. Airlines are leveraging older aircraft to meet pent-up passenger and freight demands, creating new opportunities within the repair and replacement space.

Among our survey respondents, 28% expect MRO spend to increase over the next six months, with 47% expecting the spend to remain stable. Over the next 24 months, the executive outlook is more positive, with 69% of respondents anticipating higher MRO spend (figure 7).

These views align with MRO activity. The MRO landscape overall continues to face short-term issues, including supply chain challenges, parts availability, and workforce shortages.[41] But it is getting a boost from delivery crunches affecting narrowbody aircraft. Certification delays, for example, are affecting the MAX 7 and MAX 10 models and production delays are affecting both the Airbus A320 and A321neo families. To meet increasing consumer demand for travel, airlines are retaining older aircraft, which has fueled a trend in cabin reconfiguration across all geographies. HAECO, for example, is witnessing increased demand for interior reconfiguration across the narrow-body A320s and Boeing 737s as well as the wide-body A330s and Boeing 777s.[42]

To reduce life-cycle costs for aircraft and engines, airlines are also pursuing more proactive repairs and replacements. The idea is to safeguard against more expensive problems that could occur in the longer run without such measures. For parts, they are increasingly scrutinizing serviceable material and parts manufacturing approval (PMA) parts to further save on costs.[43]

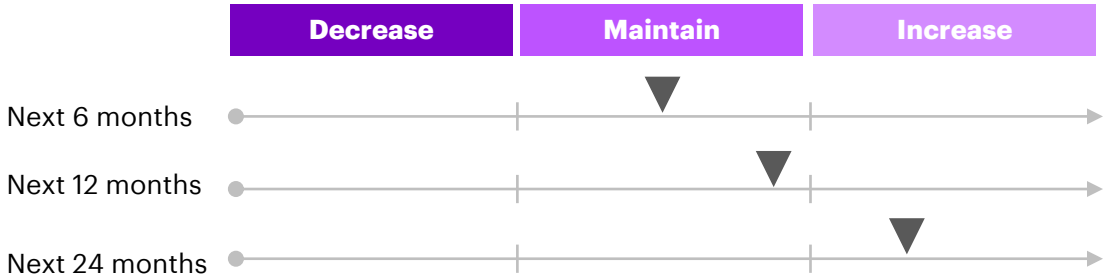
MROs are planning to add more capacity in line with surging demand across certain geographies, even as overall shop visits stay below 2019 levels. The engine segment is likely to return to pre-COVID levels in the second half of 2024.[44] However, there are interim challenges facing engine MROs. A recent issue with the powder metal used in certain engine parts will lead Pratt & Whitney to remove 600 to 700 PW11 GTF engines between 2023 and 2026. This will further stress MRO capacity.[45] A majority of the incremental engine removals will occur in 2023 and early 2024. Pratt & Whitney in its Q3 analysis, reported a net pre-tax charge of $2.9 billion related to the powder metal issue.[46]

Another trend affecting the MRO activity: the rising demand for air freight. Asia Pacific already accounts for one-third of global freight demand and economic growth and urbanization is fueling further growth. To meet increasing freight demand, we are seeing a corresponding rise in passenger-to-freight (P2F) conversions. According to Boeing, the global P2F market is estimated to reach $5.2B by 2029, with around 1,300 P2F deliveries expected globally across the next two decades.[47]

Meanwhile, MROs and advanced air mobility OEMs are laying the groundwork for the maintenance ecosystem needed to serve this new class of aircraft. For example, Swiss Aviation Software (Swiss-AS) and Volocopter have signed a multi-year contract for Aircraft Maintenance and Operations System (AMOS), a software application used in the aviation industry for managing aircraft maintenance, engineering, and logistics operations.[48]

The combined effects of slower aircraft production rates, growing consumer demand and airline deferred maintenance are driving mergers and acquisitions in the MRO space. Recent activity includes Heico's acquisition of Wencor. The deal, estimated at $2B, is one of the largest in MRO history.[49]

Figure 7: Maintenance, repair and overhaul (MRO) activity outlook



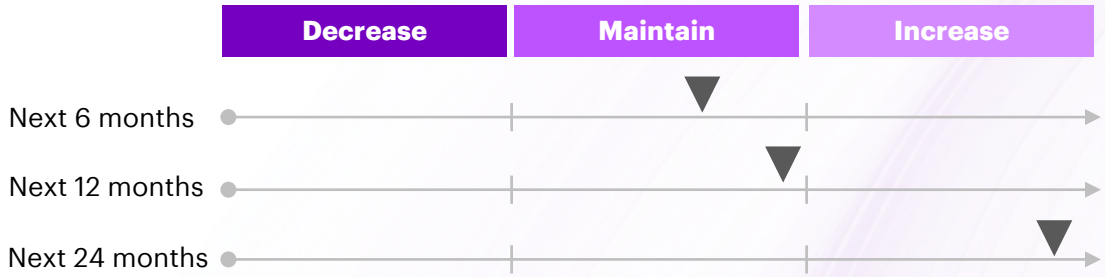
Production outlook

The first nine months of 2023 saw improvement for the OEMs compared to the same period in 2022, supported by strong demand and supplemented by a steady increase in production rates, despite supply chain issues.50

There has been continued pressure on the supply chain, aggravated by the Russia-Ukraine war, leading to delay of materials and parts during the first half of the year. However, the OEMs are trying to maintain a steady increase in production. Boeing, for instance, has accelerated plans for 737 production from 31 to 38 per month and is targeting 50 per month by 2025/26. Nevertheless, due to rework needed to fix a nonconformance issue in the aft pressure bulkhead, the company has lowered down on the expected deliveries from 400-450 airplanes to 375–400 airplanes for 2023. As for 787, the company is transitioning from four to five per month and is targeting 10 per month by 2025/26. The expected deliveries for the 787 is 70–80 airplanes in 2023.[51] Airbus is targeting a production rate for its A320 family of 75 by 2026. To ramp up production, Airbus has launched a state-of-the art, automated A321XLR equipping hangar in Hamburg, Germany. The hangar will help to expand the manufacture of A321 fuselages.[52] For its A330 model, the company aims to produce four per month in 2024; for the A350, the target is 10 per month by 2026.[53]

In the near-term, production capacity looks stable, with 56% and 75% of executives expecting the capacity to remain the same in the next 6 months and 12 months respectively. However, the outlook is optimistic in the mid-term, with 78% of executives expecting capacity to increase in the next 24 months (figure 8).

Figure 8: Production capacity outlook



Supplier delivery outlook

While some supplier issues are waning, others remain very challenging, likely lasting well into 2024 and even 2025.

Supply chains will eventually match OEM expectations, making up lost ground and adjusting to increasing demand. Nevertheless, Tier-1 suppliers continue to suffer from difficulties throughout their supply chains. As Safran CEO Olivier Andries said bluntly in July 2023: "We are still navigating through supply chain challenges every day, everywhere."[54]

Indeed, despite progress in some areas, production of new aircraft is constrained by shortages in raw material, components and parts, including engines. Airbus CEO Guillaume Faury described the current situation as "overall challenging" and predicts that the problems will "last all along 2023 and potentially till the beginning of next year."[55]

Boeing CEO Dave Calhoun shared a similar sentiment, noting that progress to fix supply chain constraints has been "frustratingly slow" and that he expects problems to last until the end of 2024.[56] And Andy Cronin, CEO of Avolon, an aircraft lessor, said in July 2023 that the post-pandemic recovery in air travel has left aircraft manufacturers and suppliers struggling to meet rising demand in production and maintenance. He also believes that supply chain issues will persist until 2025.[57]

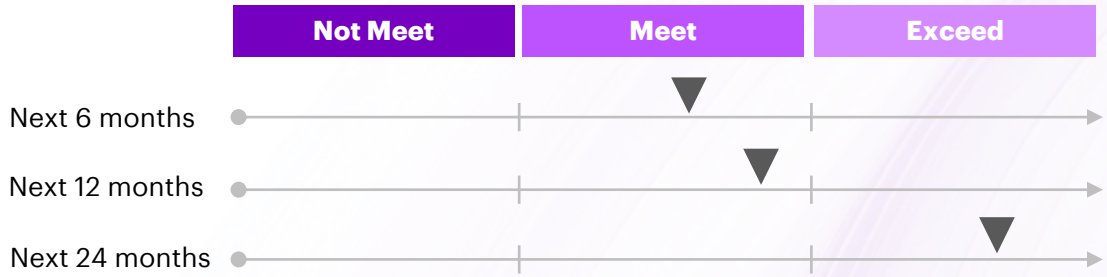
Suppliers are taking a range of actions to mitigate the problems. For example, Embraer has sent employees to critical suppliers around the world to help them boost production levels. And Dassault Aviation has acquired a few small suppliers that were planning to exit the aerospace industry.[58]

OEMs are also trying to support their key suppliers through this ongoing struggle. Boeing, for example, now holds monthly meetings with Tier 1 companies to mitigate supply chain risks.[59]

Despite the continuing issues, 72% of executives expecting confidence in their supply chain's timeliness and quality over the next six months.

And there is far more optimism for the medium term, with 100% of executives expressing confidence about suppliers meeting or exceeding delivery expectations in the 12-month timeframe. The 24-month outlook is also positive, with 94% expressing confidence about suppliers meeting or exceeding delivery expectations (figure 9).

Figure 9: Supplier delivery outlook



Production input cost outlook

Pressure on wages, parts shortages and high demand for aerospace-grade raw materials are pushing up production costs, prompting tough conversations with ecosystem partners.

The price of raw materials rose steeply over the past year (the price of stainless steel has doubled since September 2022). Yet 69% of the executives we surveyed expect raw material costs to stabilize over the next 6 months. Longer term, however, they predict that raw material costs will increase again. Specifically, 51% said they think raw materials costs will increase over the next 12 months and 81% believe it will increase over the next 24 months (figure 10).

As a result of these increased costs, lower-tier manufacturers have found themselves in a difficult position. To protect themselves, many of these companies, including TNT Aerospace and Cajero, are adding inflation clauses to their long-term contracts with OEMs.[60]

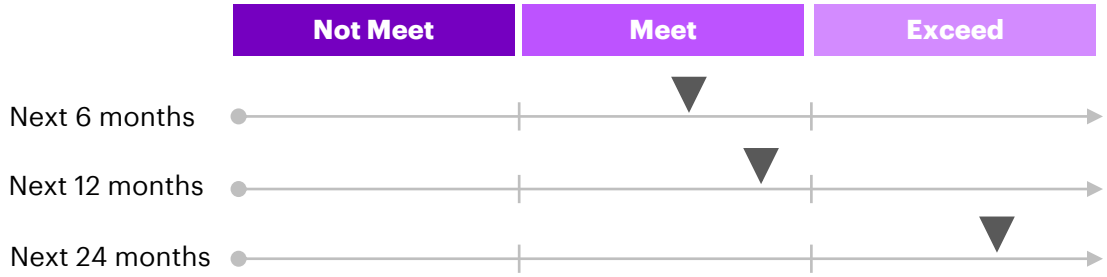
As aerospace businesses push for lower supplier costs, they acknowledge that risk mitigation in their supply chains is needed and are taking steps to address them. RTX, for example, allows its supply chain partners to participate in its own agreements for raw material supply to reduce risk and lower partners' supply costs at the same time.[61]

Figure 10: Raw materials cost outlook

Executives' views on the cost of sub-systems and parts are similar to their views on raw materials, with 78% expecting cost stability in the coming six months, 63% expecting price increases over the coming 12 months, and 75% of executives predicting cost increases over the 24-month timeframe (figure 11).

Although pressing demand for some components and parts, such as semiconductors, has eased, the overall situation is still volatile. According to GKN CEO David Paja, "All OEMs are struggling to get different components and sometimes these issues surprise them [disrupting the manufacturing process]. A lot of the issues are around castings and forgings. The fundamental problem is that the time it takes to get parts can be months in complex supply chains and we have to sort this."[62]

Figure 11: Subsystem or parts cost outlook



On the workforce side, 50% of our surveyed executives expect labor-related production costs to be stable over the next six months and 41% anticipate increased costs. Similar to their views on other cost areas, 78% of executives expect labor-related costs to rise in the two-year timeframe (figure 12).

Figure 12: Production labor cost outlook

Generative AI spurring initiatives

Almost all—98%—of the executives we surveyed expect Gen AI to transform their companies; On average, 81% expect to see that transformative impact begin to occur across functions within the next three years.

The changes have already begun. The pace of Gen AI implementation is stunning. Despite the relatively nascent state of the technology, 59% of surveyed executives said they are already exploring use cases for Gen AI to transform functions and processes. However, it's also clear that if Gen AI is to live up to its potential, aerospace companies and the industry at large will need to get out in front of a myriad of concerns related to trust and security. They will need to develop a systematic approach to responsible AI.

As supply disruptions persist, 66% of executives expect Gen AI to strengthen supply chain resiliency. They look in particular at the technology's potential to enhance interactions with n-tier supplier networks, provide proactive risk management and support intelligent buying. Most executives — 91%—executives anticipate this value to begin having a transformative impact within the next three years (figure 13).

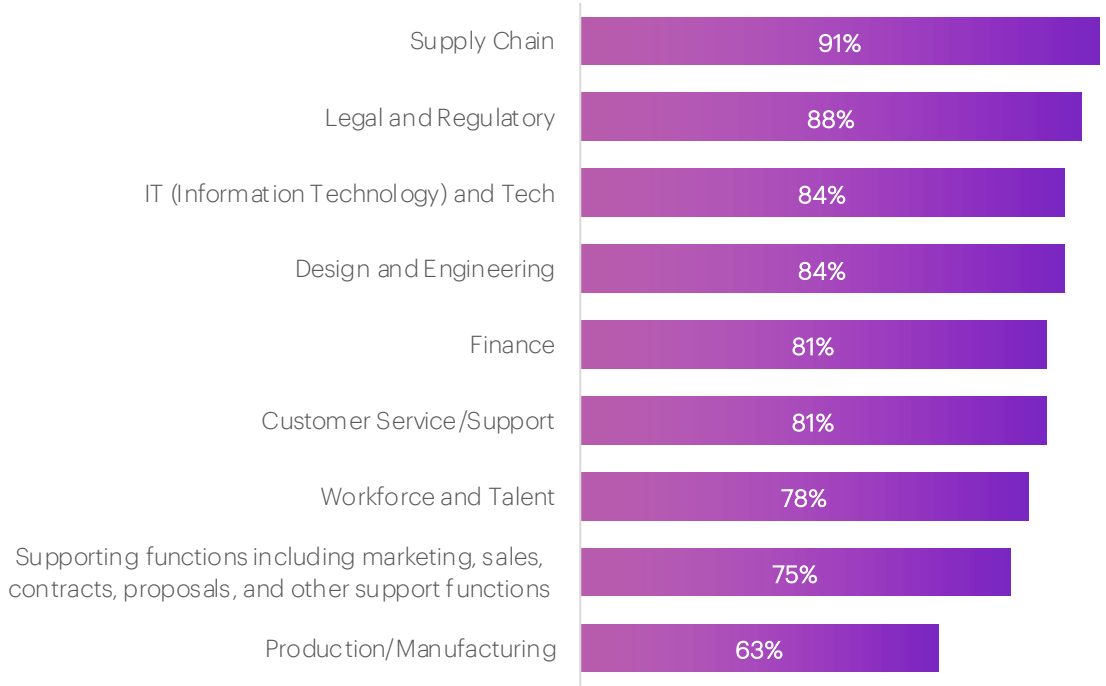
Notably, our survey revealed that 69% of executives expect Gen AI to bring customer service and support to new levels. The technology has the potential to automate technical publication development, streamline customer interactions and quickly mine more data than ever before for relevant customer insights. Among our respondents, 81% anticipate this value to begin having a transformative impact within the next three years (figure 13).

The ability to decrease time-to-market for new or updated products and services drives competitive advantage. 60% of executives agree accelerated innovation to be a benefit of AI foundation models, underlining the need for an AI-powered digital core.[63] The technology fuels transformational change by automating simulations and optimizing design and engineering workflows. And a strong majority of executives, 84%, believe this benefit will begin to transform processes in the next three years (figure 13.)

Aerospace production is complicated and involves many steps from material to fabrication to final assembly. The majority of executives emphasized cost reduction and efficiency gains as the value that Gen AI could offer production and manufacturing. That said, while the majority saw a transformative impact within the next three years, it was at a lower 63% response rate versus the other functions that they were more bullish about.

Gen AI is booming and will soon become table stakes; the A&D industry is beginning its journey and establishing proofs of concept (POCs) and pilots. But how will companies move from POCs to at scale and reap improvements? As aerospace companies continue their Gen AI journey, they need to establish a strong responsible AI foundation and identify early, no-regret use cases to tackle. Examples of these use cases include contract management, invoice processing/payment reconciliation and HR assistants.

Figure 13: Executives anticipating Gen AI to begin to have a transformative impact within the next 3 years



Challenges may keep executives up at night, but planning is preparing them to handle whatever the future holds

Executives have expressed continued, heightened concern that geopolitical instability will exacerbate their companies' vulnerability to supply chain disruptions. They also anticipate this status to persist for the next 6 to 12 months.
In the short term, specifically within the six-month timeframe, executives are also apprehensive about interest rates, particularly their effect on financing costs.[64] Even so, the sustained volume of orders from airlines in the first half of 2023 indicated that financing costs did not substantially affect aircraft acquisition in that period. Notably, Boeing and Airbus collectively reported 2,205 net new orders between January and September 2023, marking a 104% increase compared to the same period in 2022.[65]

Climate change is also a growing concern, with a significant surge in flight delays, cancellations and heightened turbulence primarily attributed to the growing influence of extreme weather events.[66] However, over the extended two-year timeframe, executives shared greater concern across macroeconomic and geo-political risks (figure 14).

While anticipating growth, aerospace companies are pragmatically bracing themselves for potential challenges. They are developing scenarios where risks come to fruition and preparing "Plan Bs" accordingly. Notably, in its H1 2023 results, Rolls-Royce introduced two forecasting models covering an 18-month period: a base model and a stressed downside model.[67] In the downside model, the company factored in reduced demand resulting from a global economic downturn and amplified supply chain challenges.

Figure 14: Executive geo-political risk concern levels (versus last year)

Broader Categories	Geo-political factors	Next 6 months	Next 12 months	Next 2 years
Political Condition	Terrorism*	Similar	Similar	Greater
	Political instability	Similar	Similar	Greater
	Regional armed conflicts	Similar	Similar	Greater
Economic Condition	Worsening economic conditions	Similar	Similar	Greater
	Interest rate changes	Greater	Similar	Similar
	Exchange rate changes	Similar	Similar	Greater
Climate changes	Weather Volatility	Similar	Similar	Greater

*The executive survey was administered prior to current developments in the Middle East.

Regional outlooks

North America: Ongoing production ramp-up along orders spree

Boeing deliveries between January and September 2023 reached 371 aircraft, a 13% YOY increase, with an increasingly positive outlook reflecting strong demand from airlines. The company recorded 965 net orders over that period—123% growth versus the same period in 2022. Its biggest order came from Air India, which finalized a deal for 190 737s, 20 787s and 10 777Xs with an option to add 50 737s and 20 787s. Other notable deals included 40 737 MAX for Irish lessor Avolon and 78 787s for Saudia and Riyadh Air with an option for 43 more.[70]

On production, Boeing is gearing up to produce 38 737s per month by the end of 2023, with a goal to reach 50 per month in the 2025/26 timeframe. The company now expects to deliver 375–400 narrow-body aircraft in 2023, a reduced number from the 400–450 announced at the beginning of the year. Wide-body aircraft production is also ramping up. Current production expectations have increased from four to five 787s per month by the end of 2023, and the company's longer-term goal calls for producing 10 per month in 2025/26. Boeing expects to deliver 70–80 Dreamliners in 2023.[71] The production rate for 767s remains at three per month, while production plans for 777s should reach four per month in 2025/26.[72] These production plans are maintained by Boeing despite ongoing supply chain challenges.

Investments are also bolstering the positive outlook in North America. For example, Mid-Continent Instruments and Avionics plans to expand its Wichita site to accommodate increased demand for its products.[73]

Overall, 2023 growth for the industry in North America is expected to be 3% lower compared with 2019 and 10% lower compared with 2018 (figures 15 and 16). Nonetheless, 2023 growth is anticipated to increase 12% YOY. That's the number to bear in mind, as recovery continues.

Figure 15: Outlook for North America

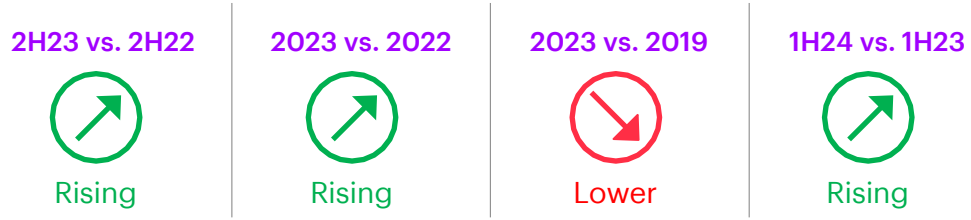
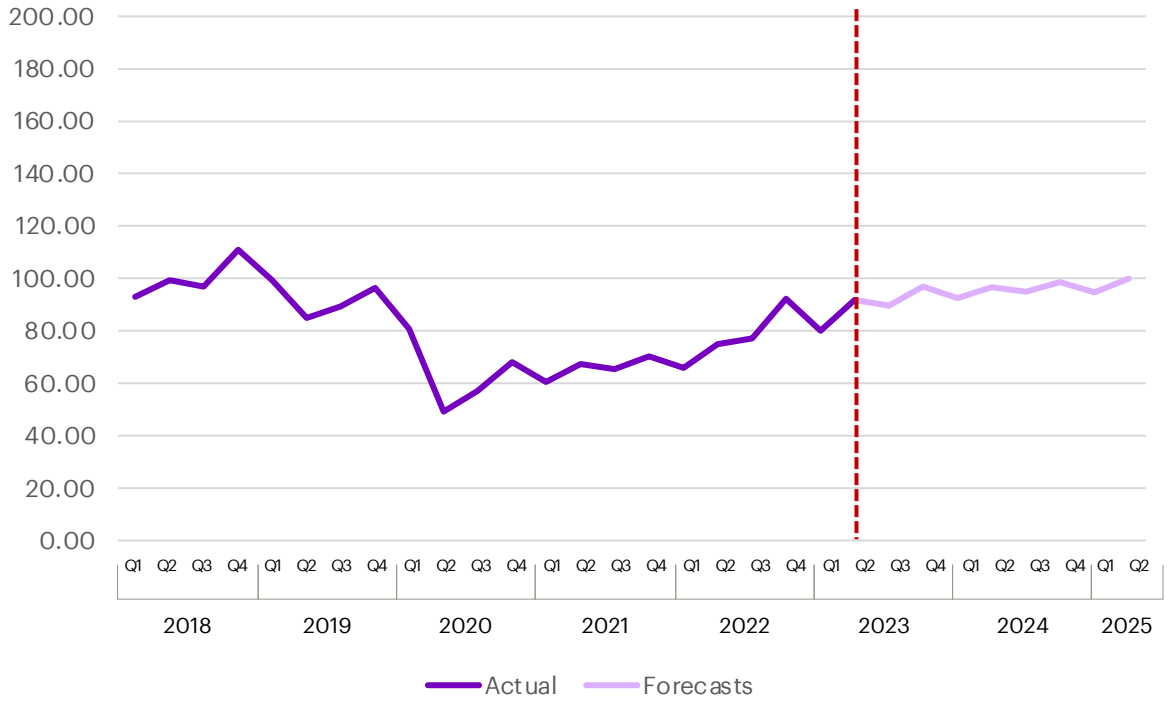


Figure 16: North America commercial aerospace index (USD, 2018 = 100)



Europe: Gradual production ramp-up as orders multiply

The Airbus net order book for January–September 2023 stood at 1241 aircraft ordered and 488 delivered, 92% and 12% more than the same period in 2022. [74] The company's commercial revenues for the first nine months of 2023, which increased by 18% YOY, can be attributed to higher deliveries.[75]

On the production side, despite ongoing supply issues, Airbus aims to boost production of its narrow-bodies over the next three years. Specifically, Airbus expects to reach production rate of 14 A220s and 75 A320s per month in 2026. With wide-bodies, the company targets an increase in A330 production to four per month in 2024, while the A350 monthly production rate is expected to reach 10 in 2026.[76]

On the demand side, the first nine months of 2023 were among the best in Airbus history. IndiGo and Air India placed massive orders in June, concentrated in the A320 family. IndiGo signed a deal for 500 A320 jets, bringing total A320 order from this airline to 1330.[77] Other notable deals in this period included additional 75 A321 jets for Hungarian low-cost airline Wizz Air,[78] and a firmed-up commitment of 20 A330s for Irish lessor Avolon.[79]

Growth across European aerospace companies can also be seen in terms of new investments. Safran is building a new compressor blade factory in Belgium to support a production ramp-up of its Leap turbofan.[80] And Airbus has opened a technology hub in the United Kingdom to accelerate work on its next-generation wing.[81]

With a 10% YOY recovery anticipated in 2023, European commercial aerospace revenues will be 14% lower than in 2019 (Figures 17 and 18). But Europe's commercial aerospace market is solidly in recovery mode. It should realize a full recovery to pre-pandemic levels in 2025, even though supply chain issues and an overall difficult economic situation in the region are hampering progress.

Figure 17: Outlook for Europe

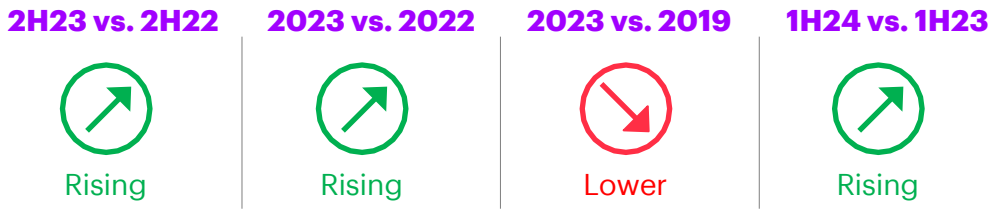
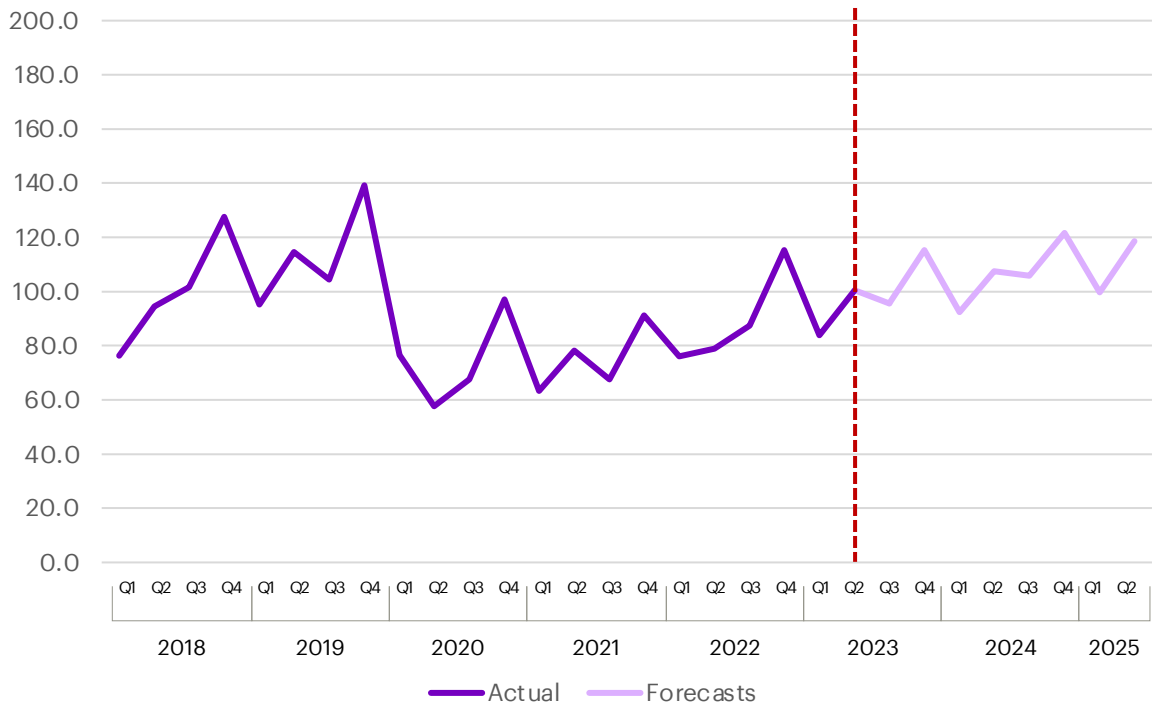


Figure 18: Europe's commercial aerospace index (USD, 2018 = 100)



Asia Pacific: Record aircraft orders amid surge in air traffic

Airbus and Boeing received a total of 1057 orders from Asia Pacific airlines in the first nine months of 2023, with a majority coming from IndiGo and Air India. That represents 120% YOY order growth.[82]

It's no wonder that US and European aerospace manufacturers see Asia Pacific as a good place for investment, in terms of both new and existing facilities. This past year saw Safran opening a new factory in its Guiyang facility in China,[83] and Boeing investing $100M in infrastructure and programs to train pilots in India.[84] Smaller enterprises are also increasing their presence in the region, such as Bikar Aerospace's decision to establish advanced service center in India.[85]

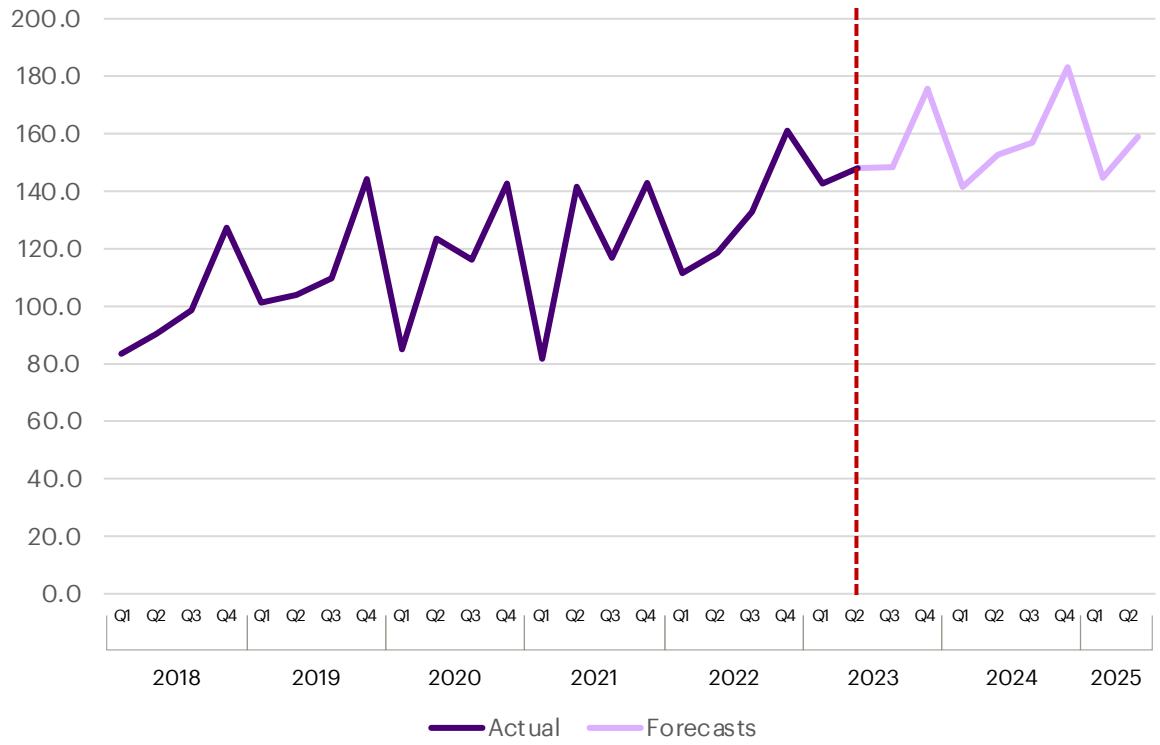
Regional companies are investing in the region. For example, COMAC has set up a support office in Indonesia — its first overseas location.[86] And SIA Engineering announced a joint venture with Cambodia Airport Investment Co. to open a site for line maintenance services at Phnom Penh's Techo International Airport.[87] The Asia Pacific region saw air traffic surge by 126% YOY in the first half of 2023, which has also bolstered MRO activities.[88] Representative of this trend, ST Engineering recorded 32% YOY growth in commercial aerospace revenue in the first half of 2023.[89]

Overall, 2023 commercial aerospace revenue for the Asia Pacific region is expected to increase 27% YOY, driving the overall market 39% higher than in 2019 (Figures 19 and 20). MRO businesses have played a big part in this growth, as have aerospace suppliers located primarily in China.

Figure 19: Outlook for Asia Pacific

2H23 vs. 2H22	2023 vs. 2022	2023 vs. 2019	1H24 vs. 1H23
Rising	Rising	Higher	Rising

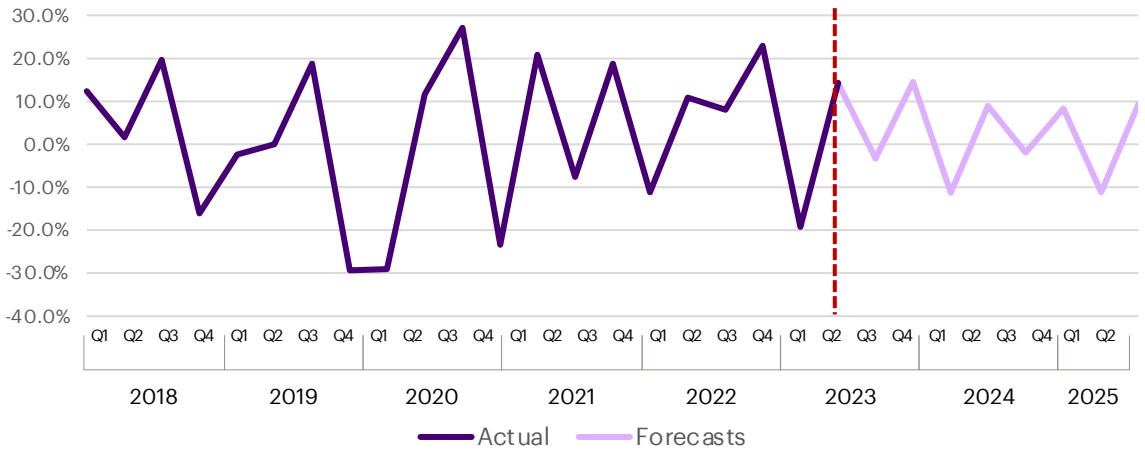
Figure 20: Asia Pacific commercial aerospace index (USD, 2018 = 100)



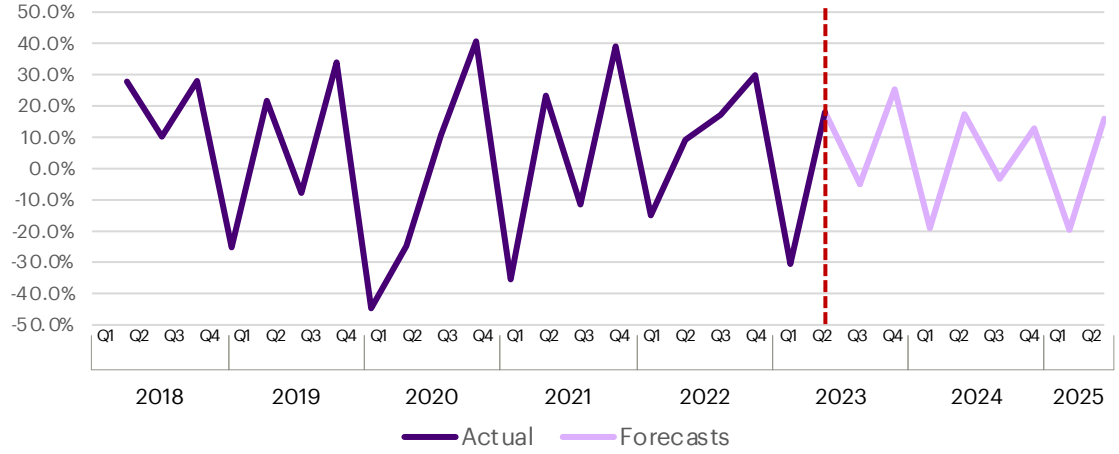
Appendix

Global and regional and commercial aerospace index performance (QoQ percentage change)

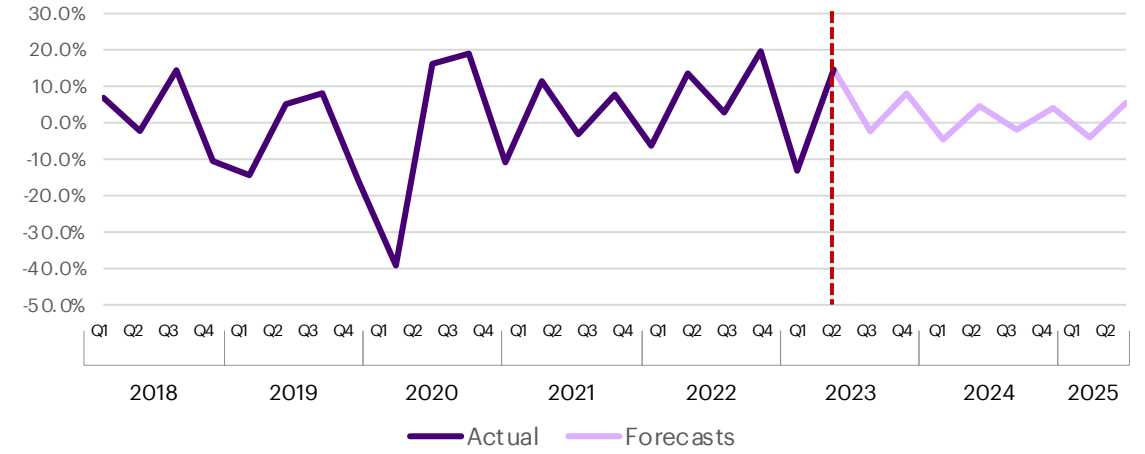
Global



Europe



North America



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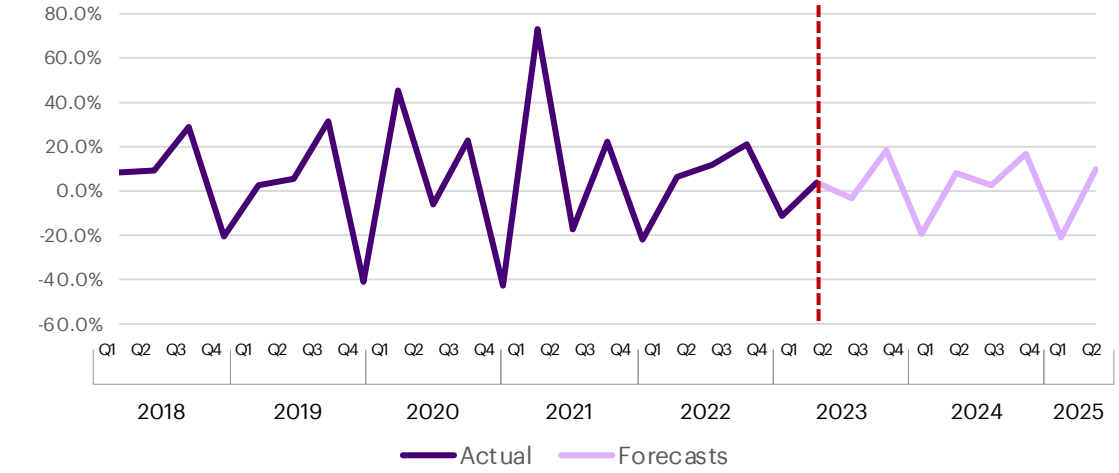
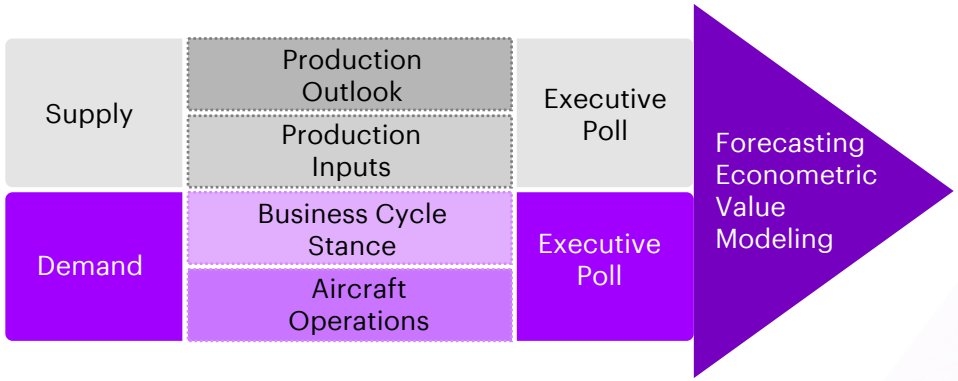


About the Accenture Commercial Aerospace Market Insight Report

Combining sophisticated econometric modeling methodologies to drive quantitative quarterly forecasts on the health of the commercial aviation market, with insights from leading aerospace executives worldwide, the Accenture Commercial Aerospace Insight Report provides a unique perspective on short- and medium-term trends and drivers in this market, covering a wide range of activities, from suppliers to MROs.



Regional forecasts are in the highest-impact regional currency, with the global index aggregated in US dollars, using current exchange rates (at the time of writing). The index baseline year is 2018, and both regional and global indices are based on this year.

To complement econometric modeling, we polled executives at major commercial aerospace companies. The outlook indicators in this report are based on a combination of Accenture's econometric modeling and that global commercial aerospace executive poll. We conducted our poll in August 2023; views are subject to considerable change as conditions can rapidly evolve.

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