



Aerospace and defence M&A trends 2020–2030: in search of innovation

Autumn 2019



Contents

- 03 Executive Summary
- 04 Overview
- 05 A&D today – rising demand, rising costs
- 08 Future trends – mind the gap
- 11 Quotes
- 12 Selected Mergers Alliance Deals
- 13 Contacts

Executive Summary

The aerospace and defence sector faces significant challenges over the coming decade that will force a shift in strategy over the next few years. This shift is from a focus on maximising production to a focus on innovation in order to tackle rising costs, address environmental concerns, increase efficiency, maintain the highest levels of security – both physical and digital – and meet the modern-day needs of the commercial and military sectors.

A lack of investment in their own R&D programmes means the bigger players will turn to smaller suppliers with cutting-edge solutions. At the same time, defence contractors will be encouraged by governments to be more cost efficient in their R&D by sourcing components and expertise from start-ups and SMEs. Both trends will lead to a rise in M&A activity among the sector's mid caps and SMEs supplying the sector as players seek to secure their supply chains, reduce the competition and lock in synergies.

The need for innovative solutions is already triggering change in the sector. Soon it will be the driving force, a force that will set the pace for at least 10 years.

Mergers Alliance team in France, has recently completed a number of deals in the aerospace and defence sector, a sector in which it has strong links with institutions and investors and one that is seeing a recurring deal flow.

Drawing from their experience and that of other Mergers Alliance European partners in Germany, Scandinavia and the UK, the dedicated A&D team in Paris has been analysing current and future trends and produced this paper setting out predictions and highlighting specific areas where increasing levels of activity are expected.



Yann Chamary

Aurignac Finance Vice-President



Raphael Brenier

Aurignac Finance Partner

Overview

After nearly a decade of horizontal merger and acquisition activity aimed at driving up production to meet growing demand, the European aerospace and defence sector is today facing a new set of challenges and trends that will shape the deals over the coming decade or so.

Rising development costs, the need to develop more energy efficient, safer and quieter aircraft in response to tougher regulation, and shifting geopolitical forces will be among the new driving forces influencing strategy in both the commercial and military sectors. New technologies such as 3D printing, Artificial Intelligence and Big Data already offer much promise in bringing down costs, combating cyber threats and improving aircraft design and safety as well as fuel efficiency. All will only become more influential over the next 10 years.

But the costs involved in developing a successful new technology can be prohibitively high, with only a relatively few projects being successful. This factor will trigger a shift over the next few years in M&A activity from horizontal to vertical targets within the supply chain as players search for innovative solutions.

Once this shift is complete, we predict the start of a new long cycle where much of the M&A activity will be in the mid-cap supply-chain sector. Players will vie to spot and buy companies with promising complementary technologies, allowing them to avoid the risks of developing their own. Inevitably, there will also be much interest in nimble start-ups and smaller companies, which often produce innovative solutions at far lower cost than bigger, well established companies.

We also predict a fall-off of mega deals. With just five programmes from two manufacturers – Airbus' A320, A350 and Boeing's 737, 777 and 787 – supplying 70 per cent of the world's commercial aircraft and a similarly small number of manufacturers in the defence sector, there is scant opportunity for mega mergers among the manufacturers, leaving only the suppliers to do deals. Even in this sector, we believe going forward deals comparable to United Technologies' \$30bn acquisition of Rockwell Collins, Safran's \$7.8bn acquisition of Zodiac or Boeing's \$4.2bn acquisition of the commercial arm of Brazil's Embraer will be thin on the ground.

Finally, we believe the shifting geopolitical landscape will prompt governments across Europe to encourage established defence players to work with SMEs and start-ups already developing cutting-edge technology as they re-equip their military with modern weapon systems and precision aircraft. This will trigger deals as companies look for newly developed cutting-edge technology, synergies and complementary work practices and larger players seek to secure their supply chain.



A&D today – rising demand, rising costs

Civil Aviation

Demand for new aircraft has been growing steadily. Since the 1970s, air traffic has doubled every 15 years – a trend forecast¹ to continue largely thanks to economic growth in emerging markets, particularly in Asia Pacific where the commercial fleet is expected to treble from 2018 to 2037². In Europe and North America, the need to replace ageing fleets with more fuel-efficient, quieter, safer and lighter aircraft as well as air traffic growth will also fuel strong demand.

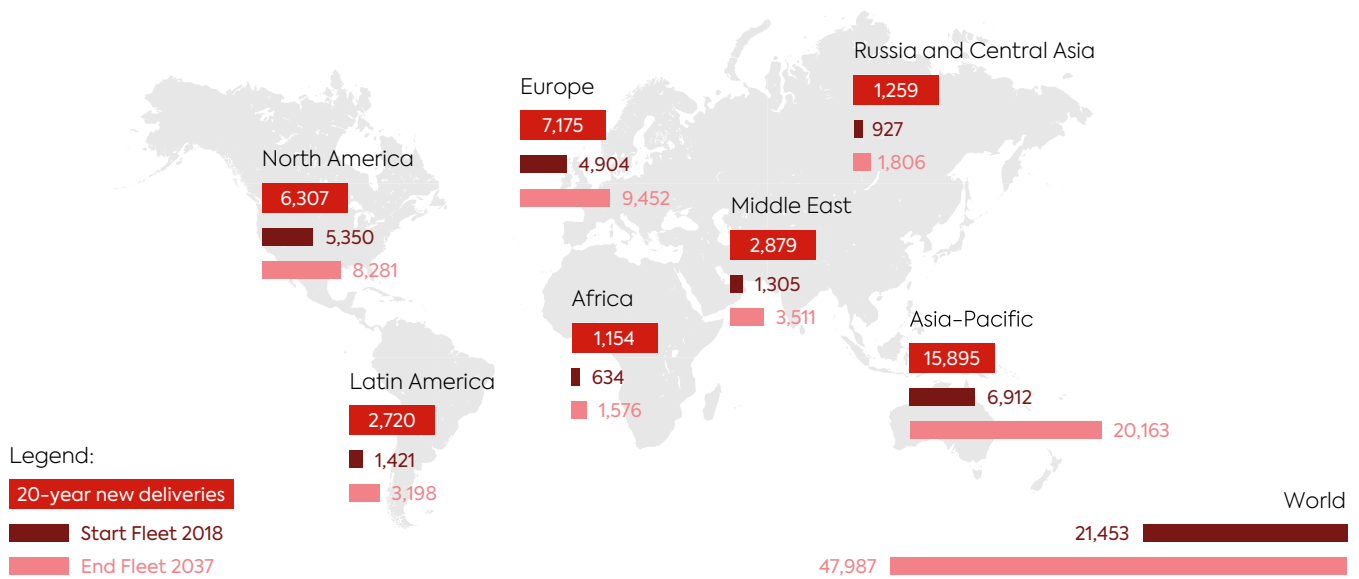
Over the next two decades, the total global fleet will need to more than double to meet this rising demand to some 48,000 aircraft, 38,000 of which would be new deliveries. While new production programmes are emerging from other regions, particularly China and Russia with the Comac C919 and CRJ929 and the Irkut MS-21 respectively, there is a marked reticence by European and North American buyers to switch from their two tried and tested aircraft providers. This means the increase in demand will largely have to be met by Airbus and Boeing.

A&D today – rising demand, rising costs

Civil Aviation

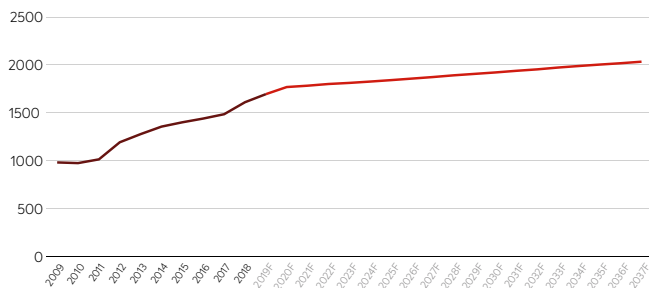
Rather than continue to invest in increasing production, we believe the most likely way the industry will meet rising demand in the long run will be to look for and employ innovative new technology. This might be technology that allows carriers to increase the number of passengers/freight, cut manufacturing costs, speed up manufacturing or make aircraft safer, quieter and more fuel-efficient. This search will trigger M&A activity in the supply chain as players seek to lock in advantages and synergies, remove competition and secure their supply chains.

Market Outlook 2018 - 2037



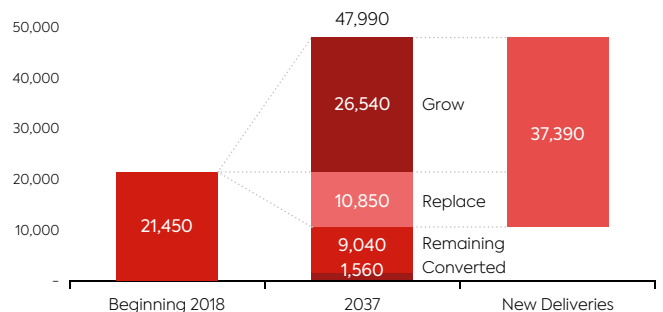
Source: Airbus Global Market Forecast 2018-2037

Aircraft Deliveries 2009 - 2037



Source: Airbus Global Market Forecast 2018-2037, Boeing Commercial Market Outlook 2018-2037, Deloitte 2018 Global Aerospace and Defense Industry Outlook

Number of Aircraft



Source: Airbus Global Market Forecast 2018-2037



A&D Today - rising demand, rising cost

Military Aviation

Heightened security threats in a number of regions have led governments in North America, Europe and some Middle Eastern and Asian countries to increase their national defence budgets. Many plan to re-equip their armed forces with modern weapon platforms and next-generation technologies to protect against cyber attacks, improve intelligence gathering and offer precision strike capabilities.

In Europe, governments are also being urged to increase their budgets to meet the NATO defence-spending target of 2 per cent of GDP. In France, for example, this translates to a 40 per cent rise in defence spending over the coming six years, with an initial rise of €2bn a year between 2019 and 2022, increasing to €3.5bn a year until 2025. This represents 5 per cent growth year-on-year. We expect to see some of this additional budget spend feed through to new military aircraft and the development of new technologies. Separately, ongoing joint European aircraft programmes such as the Airbus Eurofighter as well as significant national programmes such as Saab Gripen and Dassault Aviation's Rafale will mature.

It is well recognised these programmes are incurring exponential cost hikes – think Norman Augustine, former president of Lockheed Martin, and his law XVI: “In the year 2054, the entire defense budget will purchase just one aircraft. This aircraft will have to be shared by the Air Force and Navy 3 ½ days each per week except for leap years, when it will be made available to the Marines.”

We believe these cost pressures will fuel M&A activity similar to that forecast in the commercial sector as manufacturers seek to buy complementary new technology at a lower cost than developing it in-house.



Future trends – mind the gap

The past 10 years for the big players have been all about ramping up aircraft production – at the expense of research and development. This has led to significant technology gaps that once filled will help spur future growth to meet rising commercial and military demand. Whereas before, this would take time as the manufacturers invested in their own research and developed proprietary solutions, today game-changing innovation as well as small-step progress can be sourced and adapted from start-ups and SMEs.

With shorter development cycles than bigger, well-established players, these SMEs and start-ups can conceive, test, develop and manufacture innovative new technologies and products in small and medium batches far more efficiently. As they grow and gain regulatory approval, they will become attractive acquisition targets as the bigger players seek to integrate the new technologies and secure their supply chains.

Indeed, the European aerospace and defence supply chain is highly fragmented and consolidation will help bring down costs and broaden the application of innovative, disruptive technology. In France alone the Ministry of Defence³ records more than 2,000 SMEs turning over between €2m and €50m in the defence sector. On top of that, some 1,500⁴ companies are involved in the aerospace sector. As the larger players look to plug their technology gaps, we believe that rather than develop that technology in-house they will increasingly turn to M&A and to M&A advisors with specialist sector expertise to help them identify the right targets.

Future Trends - mind the gap

Sitting targets for M&A

Exliseat, which makes airline seats, was established in 2011 and has developed a titanium aircraft seat up to 60 per cent⁵ lighter than those produced by established seat makers. A lighter seat means an aircraft will use less fuel, emit fewer pollutants, has a longer range and can carry more passengers and/or freight – all critical factors in an industry plagued by low and falling margins.

Within two years of operations, Exliseat's seat had won regulatory approval and by March 2014 it had secured its first contract to retrofit Airbus A320s operated by Air Méditerranée. Since then it has grown steadily, and this growth is expected to accelerate after becoming a qualified Airbus supplier in April 2019, allowing it to directly equip Airbus A320s before they are delivered to the airlines.

We have identified more companies like Exliseat as prime M&A targets for larger companies looking for innovative solutions and wanting to secure their supply chain or reduce the competition. Such knowledge of the sector puts those who work with us at an advantage and will be invaluable in identifying the right targets and completing successful deals.

Our knowledge isn't limited to the aerospace and defence supply chain. We believe that suitable targets with adaptable technology will increasingly be found in unrelated industries. Our theory is backed up by last year's Apojee/Punch Powertrain deal.

In 2011, Apojee was a small, high-end engineering company with a €10m turnover making power electronics components such as reversible power supplies, fast-charging devices and embedded battery chargers, predominantly for the car industry. In 2014, it started to adapt its technology for the aerospace industry to provide reliable ignition / combustion systems at very low fuelling rates as well as electronic power-supply solutions. It made the first prototypes in 2017 and in February 2018 was acquired by Belgium's Punch Powertrain, part of China's Yinyi Group.

Again, we have already identified a number of similar interesting candidates for acquisition, leveraging our experience and understanding of trends within A&D.





Future Trends – mind the gap

Military might

Just as the commercial sector is ripe for supply-chain M&A deals, so is the defence sector. The abundance of SMEs and start-ups with innovative technologies will prove tempting to the defence contractors. There are already signs of a pick-up in M&A activity in this area – for example the November 2018 sale to Alkan of Seca Automatismes, a specialist in embedded electronics and test benches that supplies components that used 3D printing to a major defence programme.

This trend is likely to accelerate following a recent shift in government thinking in France. Paris now recognises that strict procurement and development processes can inhibit larger companies working with SMEs. To overcome this, the government recently announced a new agency – L'Agence de l'Innovation de Defense – with the remit to forge more links between defence groups, start-ups and SMEs. We believe this will lead to more opportunities for small companies to prove their technologies and ultimately become take-over targets.

We also believe further M&A activity will come about as a result of the cross-border projects such as the Future Air Combat System between France, Germany and Spain working with Dassault Aviation and Airbus.

Under these projects, different parties work closely together often finding unexpected synergies, scope to soak up excess capacity, as well as complementary working practices. We expect participants to seek to monetise these opportunities via mergers and takeovers as has already happened with MBDA, created by the merger in 2001 of Matra BAe Dynamics, Aerospatiale Matra Missiles and Alenia Marconi Systems, and which later acquired LFK in 2006.

At the same time, many military programmes are busting their budgets, prompting a rethink about how to make them more affordable. New cross-border partners and wider industry co-operation would allow the costs to be shared by a bigger group of participants and open up new markets. We would expect to see a ripple effect of cross-border deals as a result.

Finally, countries including France and Germany are increasing their military budgets. Some of the increase will be swallowed up by rising costs but we expect a significant proportion to trickle into the SME and mid-cap sector, particularly to companies developing digital tools, AI, big data analytics, automation and cyber security solutions. The effect will be to make successful suppliers either targets themselves or buyers.

¹ ICAO, Airbus GMF 2018

² Boeing Commercial Market Outlook 2018–2037.

³ French MoD website page

⁴ BCG – Industrie du futur enjeux et perspectives pour la filière aéronautique

⁵ Explicat website

Quotes

“We believe that the consolidation of the supply chain will continue over the next two years, driven by the acquisition of small and medium-sized companies. Large, Tier 2 suppliers have arisen in recent years. These now powerful players will give a high strategic value to new consolidation opportunities when the targets are strongly innovative. The deals that will be concluded in the coming months will remain highly satisfactory for the sellers considering the rise of prices paid for private assets over the past five years. The momentum of the cycle should be seized before it comes into an end.”



Jean-René Griton, MA France

“We have noticed a special focus on engineering, lightweight structures and materials, defence electronics and simulation systems. Following consolidation at OEM level, we have experienced an increased pressure on the supply chain, which will lead to further mergers, particularly across national borders. Another exciting segment is MCO/MRO. Here, we find a highly fragmented sector and consolidation is a value driver for investors. High entry barriers, constant cash flows and long-term customer relationships create attractive conditions.”



Dr. Axel Deich, MA Germany

“We continue to see some prospect of supply chain consolidation, although it is important that there are no nearer-term significant platforms coming in to production. In the UK, there is also the major factor of currency, which has clearly been significantly affected by Brexit. We are seeing increasing investment in new sustainable technologies, with electrification being a major theme, including in some important EVTOL and UAV developments. This could give rise to some important strategic partnerships and targeted technology acquisitions.”



Colin Christie, MA UK

“The defence budgets continue rising in Nordics. The current geopolitical climate will likely lead to the investment trend continuing as political pressure does not show to decrease in the foreseeable future. The Finnish Defence Forces continues renewing its naval and air defence capabilities with an investment program continuing far into the next decade and significant investments will be made into renewing ships and air fighters. At the same time, Sweden Armed Forces is also increasing military spending planning to run equipment-replacement programs. These coming investments have attracted Central European and the US defence companies.”



Mika Vauhkonen, MA Finland



Selected Mergers Alliance Deals



Aerospace embedded electronic and test benches

Company sale



 MA France advised Seca 



Shock physics for space application

Buyout





 MA France advised Thiot 



Aerospace connectivity systems

Company sale



 MA France advised ATI-Interco 



Manufacturer of ground support equipment for the aerospace

Company sale



 MA USA advised Tronair 



CONLOG GROUP

Designer, manufacturer of products for defense and security

Company sale



 MA Finland advised Conlog 



Electric generators and tachometers

Sale of Radio-Energie division





 MA France advised Zodiac 

Contacts

For information on sector trends contact the Mergers Alliance Aerospace and Defence team





 **Raphael Brenier**

 +33 1 43 12 55 13
 r.brenier@aurfi.com





 **Hakan Persson**

 +46 8 510 663 50
 hakan.persson@Experia.se





 **Yann Chamary**

 +33 1 43 12 55 10
 y.chamary@aurfi.com




 **Mika Vauhkonen**

 +358 40 738 7841
 mika.vauhkonen@experia.fi



 **Jean Rene Griton**

 +33 1 43 12 55 10
 jr.griton@aurfi.com





 **Dr. Axel Deich**

 +49 89 388 881 18
 a.deich@proventis.com





 **Colin Christie**

 +44 203 848 21 27
 colin.christie@opuscf.com



 **Steve Dresner**

 +1 312 780 7206
 sdresner@dresnerco.com

Mergers Alliance is a partnership of award-winning corporate finance specialists who provide high-quality advice to organizations which require international reach for their M&A strategies. With a dedicated industrials sector team, the Mergers Alliance partners are expertly placed to offer:

- Advice on structuring and completing deals in a wide range of sectors
- Identification of acquisition opportunities around the world
- Information on sector trends and valuations
- Access to corporate decision-makers and owners

Over 200 transaction professionals spanning over every key economic centre around the world. A network of 35 offices in 22 countries covering the Americas, MENA, Europe, Asia and Australia.

