



European Aerospace and Defense: Investing in an Era of Tumult

Artificial intelligence, sustainability, and technology-based services will transform the industry.

**By Pierluigi Serlenga, Bernard Birchler, Pascal Roth,
and Hugo Parkinson**

Authors

Pierluigi Serlenga is the leader of Bain & Company's Aerospace, Defense & Government Services practice for Europe, the Middle East, and Africa, and is based in Rome. **Bernard Birchler** and **Hugo Parkinson** are Bain partners in the Aerospace, Defense & Government Services practice, and are based in Paris and London, respectively. **Pascal Roth** is a Bain partner in the Advanced Manufacturing & Services practice, and is based in Zurich.

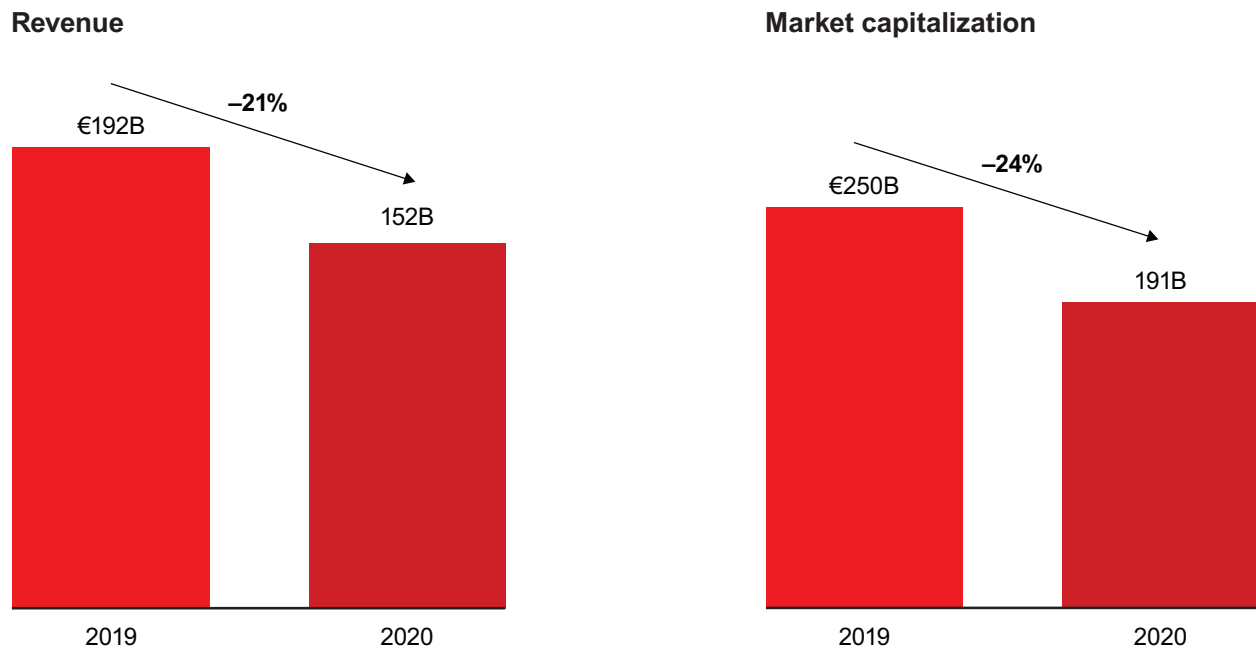
European Aerospace and Defense: Investing in an Era of Tumult

Aerospace and defense executives in Europe have rightly spent a lot of time over the past 18 months responding to the sharp decline in revenues triggered by the Covid-19 pandemic. But the bigger dilemma is the damage the crisis has done to their market valuations and balance sheets. In 2020, market capitalization for the top 10 European companies in this sector fell an average of 24% from the previous year, while revenues declined 21% (see Figure 1).

Weakened balance sheets severely limit the ability of European aerospace and defense companies to make long-term investments, just when they most need to invest. The pandemic has exposed the fragility of the industry’s supply chains and made investments in business resilience urgent. And that’s not all. As leadership teams struggle with limited resources to keep their companies running soundly, three key technology trends have begun to transform the sector: artificial intelligence, the race to decarbonize aerospace and defense equipment, and the application of new technologies to services.

To adapt to these changes and compete in the future, companies need to invest substantially in research and development, and innovate rapidly. Artificial intelligence will pave the way for efficiency improvements and higher-quality solutions, including autonomous flight systems. The race for more sustainable

Figure 1: Revenue and market capitalization of the top 10 European aerospace and defense companies fell in 2020



Sources: S&P Capital IQ; Bain analysis

aircraft will put enormous pressure on companies to develop alternative propulsion systems and adopt more sustainable fuels. Efficiency improvements alone won't achieve the required cuts in carbon emissions. At the same time, technologies such as virtual reality, robotics, and additive manufacturing are poised to transform the services sector, including training, maintenance, and repair operations.

Making those investments will be tough, given that the pandemic has drained profits at most aerospace and defense companies. The good news is that the sector's European market downturn is likely to be temporary, so projected profit pools should return to prepandemic levels.

How can leadership teams pivot and make this critical transition as new technologies reshape the market? Leading aerospace and defense executives are preparing for a new era by launching a thorough assessment of products and services to determine where they can best compete over the long term. Based on that analysis, they're starting to allocate resources to new strategic goals. Four key actions can help companies begin reorienting their strategy for the future.

Leading aerospace and defense executives are preparing for a new era by launching a thorough assessment of products and services to determine where they can best compete over the long term.

Acquisitions. Mergers and acquisitions can help companies acquire the skills and capabilities they lack in the new competitive arenas. Take the case of a large European shipbuilding group with a highly diversified product portfolio including a core business in the cruise market and the naval segment. To position itself for a changing market, the leadership team decided to expand into new segments of the shipbuilding value chain and adjacent opportunities through a series of acquisitions that take advantage of the group's existing strengths. One of the first targets was in the civil infrastructure market. Though it was a new business segment for the firm, the executive team saw an opportunity to harness the group's strengths in engineering complex metal structures and its expertise in the steel supply chain. The company is also moving into high-tech markets such as optronics, communications, and cybersecurity, both to seize new market opportunities and to develop the in-house capabilities required for secure shipbuilding operations. The division that was created to expand into new businesses is now the company's No. 2 business unit in revenues and profit.

Partnerships. To remain competitive as new technologies transform aerospace and defense, companies will need to invest heavily in research and development to close the gap with technology companies, whose R&D spending as a percentage of revenue is typically more than twice as high. Given the speed at which artificial intelligence and other technologies are developing, many companies won't be able to go it alone—collaboration and consolidation will accelerate in the coming decade. Successful companies are starting to form partnerships with other firms or lead the consolidation wave.

Given the speed at which artificial intelligence and other technologies are developing, many companies won't be able to go it alone—collaboration and consolidation will accelerate in the coming decade.

One European aerospace and defense conglomerate, for example, recently took a major stake in a European electronics company—a move that could pave the way for a future strategic partnership. Industry experts forecast that in the next decade, the defense electronics sector (including warfare electronics, radars, optronics) will grow at double the rate of the total defense market. The potential partnership could become a key force consolidating the European defense supply chain. Both partners compete with large US defense companies that have cutting-edge technology solutions and significant economies of scale. They also face increasing pressure from Asia-Pacific competitors. To succeed in a changing landscape, both European companies will invest more in a range of complex technologies.

In addition to dealmaking within national borders, leading companies are likely to consider pan-European deals. They'll also look outside the aerospace and defense industry for acquisitions and partners.

Migration away from outdated technologies. The investment in new technologies such as artificial intelligence will become urgent as consolidation creates bigger competitors. Strategically, incorporating new technologies means reshaping the organization and developing a strong bench of tech talent. Forward-looking leadership teams are starting to assess the appropriate pace for reducing R&D and capital spending on technologies that are bound to become obsolete in the coming decade. Though the change will be gradual, launching the migration process now can help companies avoid getting stuck with costly stranded capacity. Just as important, it gives leaders a head start developing and attracting the technology talent and building the capabilities vital to winning in a transformed market.

Rethink investments constantly. To help guide that transition, some companies are using systems that alert them to review levels of investment in new technologies and reduce funding of legacy technologies. Executives at a provider of satellite communication terminals for the maritime industry, for example, realized they could transform the company by repurposing their existing maritime terminals as land-based terminals to serve the booming low-earth orbit (LEO) and medium-earth orbit (MEO) satellite market. Specifically, the company decided to use its distinctive high-reliability random-protected tracking antenna architecture to enter the market for LEO satellite gateways and user terminals. That strategy helped the firm win significant contracts in a new market and migrate into faster-growth businesses.

By recognizing the opportunity early and pivoting to pursue the contracts on discrete but vital segments of new industry ecosystems, the company has significantly outperformed its business plan targets.

Covid-19 ushered in an era of unprecedented turbulence for aerospace and defense companies. Now, as the pandemic eases, executives have little time to spare. New technologies are poised to reshape the industry. Though weakened financially, the industry's leaders are moving quickly to marshal their resources and position themselves to win in a landscape that will look dramatically different in 5 to 10 years.

Bold ideas. Bold teams. Extraordinary results.

Bain & Company is a global consultancy that helps the world's most ambitious change makers define the future.

Across 63 offices in 38 countries, we work alongside our clients as one team with a shared ambition to achieve extraordinary results, outperform the competition, and redefine industries. We complement our tailored, integrated expertise with a vibrant ecosystem of digital innovators to deliver better, faster, and more enduring outcomes. Our 10-year commitment to invest more than \$1 billion in pro bono services brings our talent, expertise, and insight to organizations tackling today's urgent challenges in education, racial equity, social justice, economic development, and the environment. We earned a gold rating from EcoVadis, the leading platform for environmental, social, and ethical performance ratings for global supply chains, putting us in the top 2% of all companies. Since our founding in 1973, we have measured our success by the success of our clients, and we proudly maintain the highest level of client advocacy in the industry.



For more information, visit www.bain.com

AMSTERDAM • ATLANTA • AUSTIN • BANGKOK • BEIJING • BENGALURU • BERLIN • BOGOTÁ • BOSTON • BRUSSELS • BUENOS AIRES • CHICAGO • COPENHAGEN
DALLAS • DENVER • DOHA • DUBAI • DÜSSELDORF • FRANKFURT • HELSINKI • HONG KONG • HOUSTON • ISTANBUL • JAKARTA • JOHANNESBURG • KUALA LUMPUR
KYIV • LAGOS • LONDON • LOS ANGELES • MADRID • MANILA • MELBOURNE • MEXICO CITY • MILAN • MINNEAPOLIS • MONTERREY • MOSCOW • MUMBAI
MUNICH • NEW DELHI • NEW YORK • OSLO • PALO ALTO • PARIS • PERTH • RIO DE JANEIRO • RIYADH • ROME • SAN FRANCISCO • SANTIAGO • SÃO PAULO
SEATTLE • SEOUL • SHANGHAI • SINGAPORE • STOCKHOLM • SYDNEY • TOKYO • TORONTO • WARSAW • WASHINGTON, DC • ZURICH