Market Overview - French Aerospace Industry

Market

- A 16.1 percent increase in total revenues in the civil sector, for a total of €31.4 billion in 2012.
- A 12.3 percent increase in military activity, for a total of €11.1 billion.

Trends and major developments

- An industry with three advantages for its development: membership of virtually all industry stakeholders in GIFAS (Groupement des Industries Françaises Aéronautiques et Spatiales), the French aerospace industries association; coordination of the sector’s R&D by CORAC (Conseil pour la Recherche Aéronautique Civile), the civil aviation research council; and the support that prime contractors give their suppliers.
- A robust sector that should benefit related markets such as maintenance, given that the fleet is growing and aging.
- Military activity characterized by few opportunities.
- A sector that is able to renew itself, develop and deal with new constraints.
- The French aerospace industry is naturally benefiting from the growth of air transport.

Stakeholders

- A French industrial structure that is shaped by factors such as world leaders in the aerospace market.
- Sector stakeholders (aircraft manufacturers, components manufacturers and maintenance specialists) that should benefit from the high demand for new and more fuel-efficient aircraft.
- Aerospace maintenance faced with the restructuring of the industrial fabric because of the numerous stakeholders and increasing number of OEMs in this subsector.

Customers
• The number of passengers, and demands for airplanes, is expected to double by 2030.
• French aerospace industry is heavily dependent on the export market.

Increase in consolidated revenues in the French aerospace industry in 2012

• Revenues amounting in total to $42.5 billion in the sector in 2012.
• Up 17.7 percent on the previous year.
• A 16.1 percent increase in revenues totalling €31.4 billion in the civil sector.
• A 12.3 percent increase in military activity, for a total of €11.1 billion.
• Main revenues in the civil sector.

Increased revenues in aerospace maintenance and components manufacturing in 2012

• An 11-percent increase in aerospace maintenance total sales, for a total of $56.8 billion in 2012.
• Sales totalled $50.9 billion in 2011.
• A market with annual growth potential of 3.7 percent, reaching $61 billion by 2019.
• Business volume of €11.4 billion, up by nearly 14 percent for components manufacturers in 2011.

Source: AlixPartners advisory firm. Latest available data, June 2013.

Market trends and major developments

The three advantages of the French aerospace industry...

• Membership of virtually all sector stakeholders in GIFAS (Groupement des Industries Françaises Aéronautiques et Spatiales)
  ○ Economic stakeholders act as partners rather than competitors in that they share strategic information on the progress of programs, production chain capacity and evolving challenges.
• Coordination of the sector’s R&D by CORAC (Conseil pour la Recherche Aéronautique Civile)
  ○ A well-defined technological roadmap that ensures investments are properly distributed among development projects.

• Collaborative approach between prime contractors and their suppliers
  ■ Prime contractors recognize the need to have loyal and trustworthy suppliers on the industrial and financial fronts.
  ■ Prime contractors are committed to giving their subcontractors clarity with six months’ worth of firm orders and support.

• Exchange to skilled workers (including apprentices) between prime contractors and their supply chains

Implications stakeholder solidarity

• Solidarity among stakeholders, a basic principle of this industry, which stems from a commitment not to slow the delivery rate that drives and motivates:
  ○ information sharing among stakeholders,
  ○ collaborative R&D,
  ○ a responsible supply chain,
  ○ financial solidarity,
  ○ skills sharing.

An industry constantly compelled to innovate

• Need for the sector to continually adapt to serious environmental restrictions (challenging environmental issues) and the imperatives of lower operating costs.
  ○ Pressure on aircraft manufacturers to produce high-performance aerodynamic aircraft with lower mass and engines that are far more fuel-efficient.

• The French aerospace industry spends the equivalent of 15 percent of its revenues on research and innovation.
  ○ Modernization and expansion of production sites, cost reduction, establishment of competitive groupings (centres of excellence), equity participation or acquisitions and sector consolidation.
Few prospects for military activity

- A market hindered by two factors:
  - Reduced funding under the new Military Programming Law:
    - plans to reduce the number of fighter planes and combat and tactical transport helicopters,
    - staggering of programs to replace tactical transport and strategic aircraft,
    - reduced budget for maintenance of aerospace equipment.
  - Exponential increase in international competition.
  - Lack of interest on the part of subcontractors and young graduates in military activity.
    - A civil sector that is now much more attractive and active from an economic standpoint.

Development of the aerospace maintenance market, an opportunity for components manufacturers

- A market that is benefiting from a growing and aging global fleet.
  - Spending that is increasing at virtually the same rate at which the global fleet is developing.
    - A fleet estimated at close to 20,000 aircraft in 2012, a figure expected to double within 20 years.
  - The aging of the civilian fleet, which will intensify in the coming years.
    - Increase in the number of A320s and A330s manufactured in the 1990s that require more maintenance attention (modernize avionics, cabin cooling, adaptation to ecological regulations, etc).
  - Growth expected for at least the next 10 years.
    - However, such growth will greatly depend on the financial health of the airlines and increasing competition between aircraft manufacturers and component manufacturers.
- Aerospace industry stakeholders positioning themselves to take advantage of a market in which airlines are closing down for economic reasons.
  - E.g. offensive led by Airbus to position itself in this market.
Economic fabric concentrated mainly in Île-de-France, Aquitaine and Midi-Pyrénées

- Twenty-eight percent of the workforce is concentrated in Île-de-France, and 28 percent and 11 percent of the workforce respectively in Midi-Pyrénées and Aquitaine.
- An increase in competitiveness clusters throughout the area, such as the Pôle de compétitivité Astech (Île-de-France), Aerospace Valley (Midi-Pyrénées / Aquitaine), Aerospace Cluster Rhône-Alpes and Invest In Bretagne.
  - Commitment on the part of SMEs to strengthen their position by grouping within competitiveness clusters to share their skills and resources to secure their growth in France and internationally.

A sector that creates jobs

- A 28.7-percent increase in the number of jobs between 2007 and 2012.
  - A sector that quickly benefited from recovery.

- Hope on the part of France’s political class that the aerospace industry will create jobs.
  - An increase in information forums on careers in aerospace.

- However, a sector that struggles to recruit qualified technical manual workers.
  - A labour shortage that impedes the acceleration of production.

**Changes in employment in GIFAS member companies, in thousands**

![Bar chart showing changes in employment from 2007 to 2012](chart.png)

Information on figures in chart

- 2007 - 132
- 2008 - 134
- 2009 - 157
2010 - 157
2011 - 162
2012 - 170


Major Stakeholders

Selected Stakeholders
(In alphabetical order)

<table>
<thead>
<tr>
<th>Company name</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aerolia</td>
<td>€1 billion</td>
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<tr>
<td>Airbus</td>
<td>€38.6 billion</td>
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<tr>
<td>ATR</td>
<td>€1.44 billion</td>
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<td>Daher socata</td>
<td>€244.49 million (2011)</td>
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<tr>
<td>Dassault</td>
<td>€3.94 billion</td>
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<td>Eurocopter</td>
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<td>Latecoere</td>
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<tr>
<td>Safran</td>
<td>€13.62 billion</td>
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<tr>
<td>Thales</td>
<td>€14.16 billion</td>
</tr>
<tr>
<td>Zodiac Aerospace</td>
<td>€3.44 billion</td>
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Customers

Anticipated increase in global traffic…

- Number of passengers expected to double by 2030.
  - An increase that is expected to be three times faster in emerging
Past five years have been marked by an increase in orders from airlines over the next 20 years:
- Probable 62.4-percent increase in the number of cargo planes.
- Number of passenger planes likely to double.
- High demand for new, more fuel-efficient aircraft, particularly single-aisle planes and long-range, high-capacity aircraft.

Decrease in orders in the sector in 2012

- In 2012, €49.7 million in orders were received for the aerospace sector.
- A 13.5 percent decrease compared with 2011.

Changes in Orders in the Aerospace Sector

Information on figures in chart
- 2002 - 25571
- 2003 - 40042
- 2004 - 36750
- 2005 - 51730
- 2006 - 46480
- 2007 - 56564
- 2008 - 46712
Civil sector orders exceed military orders

- Civil sector activity has benefited from the activities of engine manufacturers, components manufacturers and subcontractors, which have significantly increased deliveries to French and foreign manufacturers.
- Military activity is facing cuts in defence spending and increasing competition from emerging countries.

**Breakdown of Civilian and Military Orders**

Information on figures in chart

- Domestic - 37%
- Exports - 63%

*A primarily international clientele*

- Though international orders account for 65 percent of sales, this is 12 % less than 2011.
- The French aerospace industry, with its defence and security component, is the leading French exporting sector.

*Distribution of Orders by Geographic Area, 2000 to 2010*
Export orders exceed domestic orders

- Seventy-six percent of production in the aerospace sector is exported.
- Domestic orders account for 24 percent of production.

Market challenges

Opportunities

- Worldwide increase in air traffic.
- A sector in which solidarity among stakeholders is paramount.
- Growth that does not appear to be jeopardized for the coming years, owing to strong market drivers.
  - Large orders and heterogeneous clientele absorb the cyclical effects and limit fallout from the crisis for sector stakeholders (aircraft manufacturers, components manufacturers, maintenance specialists...).
- The strength of the French aerospace industry in Europe and worldwide.
  - A strategic sector for the economy that includes world leading firms.
  - International recognition of the French aerospace industry. As the CEO of American manufacturer Boeing put it, it is an industry with many talents and true know-how.
Threats

- The French / European industry is heavily disadvantaged by the fact that production is based mainly in Europe, while sales are negotiated in dollars.
- Increase in the cost of raw materials.
- The French aerospace industry competes against countries with low labour costs, particularly in the areas of maintenance operations and subcontracting.
- A sector that has difficulty recruiting technical and qualified workers, despite the creation of jobs.
- New environmental legislation and operating cost reduction imperatives are increasing business risk.
  - The cost of innovation tends to increase the number of aircraft necessary to absorb the cost of programs.
- Increasing competition from stakeholders in emerging countries such as China, India and Brazil.
- Impact of the objective to put the public accounts in order in the defence sector.

Trade between Canada and France in aerospace manufacturing

- Trade and economic exchanges between Canada and France in the aerospace sectors account for about one quarter of all trade between the two countries. These exchanges demonstrate the importance of the industrial cooperation that has been established and strengthened over the past few years between Canadian and French companies.
- Airbus Group operates in Canada through Airbus Canada, Airbus Helicopter Canada and Composites Atlantic. Airbus programs generate C$800 million dollars in Canada from activities conducted by approximately 4,000 employees working for some 100 Canadian suppliers. Airbus Helicopter Canada services and maintains a fleet of close to 600 civilian helicopters. Airbus is also acquiring Canadian aerospace equipment manufacturer Vector Aerospace (Ontario) in a bid to build on its strategy in North America in the MRO sector.
- Aerolia, which is also a subsidiary of the Airbus Group for the manufacture of
fuselage components, was hired by Bombardier to produce the fuselage for Global 7000 and 8000 twin-engine business aircraft. Other French equipment manufacturers such as Thales, Liebherr and Daher are also suppliers for Bombardier’s CRJ, Global Express, Dash 8 and Challenger series.

- CAE delivered training simulators for the Airbus A380 and A350 XWB. Some 15 Canadian companies, including Magellan Aerospace, Goodrich, Honeywell, P&WC and Alcan, are also aerospace equipment suppliers for this aircraft manufacturer.
- Pratt & Whitney Canada is the sole supplier of engines for the Airbus Group’s ATR regional aircraft, and as well, supplies Dassault Aviation with turbofans for its Falcon 2000 and Falcon 7X business jets. Héroux-Devtek supplies this aircraft manufacturer with landing gear for its Falcon 5X mid-size twin-engine business jet.

Primary opportunities for Canadian customers

- First, it is important to point out that stakeholders in this sector operate in partnerships and share information on programs and production chain capacities so as not to slow delivery rates. As a result, prime contractors use industrial suppliers and subcontractors that are also financially reliable.
- This industry dedicates 15 percent of its sales to research and innovation, half of which is self-financed.
- It accounts for a quarter of the annual trade between France and Canada and is a strategic feature of the economy.
- In the global supply chain, partnerships could be developed in the areas of composite structure segments, alloys and innovative materials, landing gear components, energy production systems, systems for controlling the environment in aircraft cabins, flight controls, satcoms relay liaisons and training simulations.
- In the maintenance sector, also with innovative niches for component inspection and composite material repair to provide in-service support.

Useful Links

- **French Aerospace Industries Association (GIFAS)**
- **Airbus for Suppliers**
- **Aerospace and Defence Industries Association of Europe (ASD)**
• Directorate General for Civil Aviation (DGAC) [French only]