



# Aerospace industry

## A VIBRANT INDUSTRY

The French aerospace industry, whose competitiveness has been founded through numerous European cooperation programs, is renowned throughout the world. Today, it is a leading industrial force, with a highly qualified workforce and a sizeable turnover, 75% being generated by exports, half of which come through the Airbus program.

The industry is involved in all sectors, with a significant impact on R&D and the balance of trade (+ €14 billion in 2008), growth and the creation of qualified jobs.

Results for 2008 once again attest to the great competitiveness of the French aerospace industry, even though the economic and financial crisis starting in Autumn 2008 marked the end of a growth cycle stretching back several years. The fall in air traffic and the slowdown of demand is however likely to be mitigated by the record number of orders received in recent years, guaranteeing sustained production levels.

## LEADERS IN THEIR FIELD

The aerospace sector is structured around 10 groups that are all at the forefront of or even global leaders in their field: EADS/Airbus, the leader in civil aircraft manufacturing for the 6<sup>th</sup> year in a row; the Safran Group, which notably includes Turbomeca, the largest manufacturer in the world of helicopter engines and SNECMA, one of the leading aerospace engine manufacturers; Eurocopter, a subsidiary of EADS, the world's leading helicopter producer, with the Tiger and Puma programs in particular; Dassault Aviation, the global leader in the high-end executive aviation market with its Falcon program and a major player in military aviation with the Rafale fighter jet; Arianespace, a world leader in launching geostationary satellites; Thales Group, a world leader in critical information systems in the aerospace, defense and security markets; and Thales Alenia Space, the leading company in Europe for satellite solutions and a major player in the orbital infrastructure field.

## KEY FIGURES 2008

UNCONSOLIDATED TURNOVER:  
**€37 billion** <sup>(1)</sup>

WORKFORCE:  
**134,700 employees** <sup>(1)</sup>

EXPORTS:  
**€22.5 billion** <sup>(1)</sup>

R&D SPENDING:  
**€2.4 billion** <sup>(2)</sup>

(1) Source Gifas  
(2) Source DGCIIS

## THEY CHOSE FRANCE

### General Dynamics

In 2008, the American aerospace and defense group, General Dynamics, decided to expand its operations to provide interior fittings for the Airbus A380 via its subsidiary Jet Aviation. This expansion will create 200 further jobs in Saint-Louis (Alsace region).

### Embraer

The Brazilian group Embraer, the world's 3<sup>rd</sup> leading aviation manufacturer after Boeing and Airbus, specializing in small and medium-size civilian aircraft for regional, business and agricultural aviation, chose France as the location for its European headquarters (Villepinte, near Paris-Charles de Gaulle airport).

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## A HIGHLY QUALIFIED WORKFORCE

The quality of the workforce is extremely important in a sector where 50% of the positions are filled by engineers and management personnel. Highly regarded specialist schools, including the ISAE and the ENAC in Toulouse and the ENSMA in Poitiers provide training for specialist engineers in France, while the professional federation GIFAS contributes to promoting and defending the interests of the sector.

## INTENSIVE RESEARCH AND DEVELOPMENT

→ **FRENCH AEROSPACE COMPANIES INVEST MORE THAN 15% OF THEIR TURNOVER IN R&D ACTIVITIES**

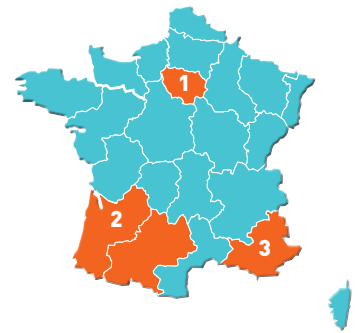
French aerospace companies invest more than 15% of their turnover in R&D activities, which is more than their counterparts in other major competing countries. Public and private R&D expenditure amounts to €2.4 billion, providing employment for 15,000 employees, including 13,000 research scientists.

Public bodies are also very active in research, particularly the ONERA (National Aerospace Research Office; 2,000 employees including 1,500 research scientists), the CNES (National Space Exploration Center which actively participates in European Space Agency programs), as well as CNRTs (National Centers for Specialized Research and Technologies). Sectors in which French research excels include propulsion and combustion, composite materials, aerodynamics, acoustics, and embedded electronic and IT systems.

## A MELTING POT OF INTERNATIONAL EXPERTISE

There are many foreign companies operating in France in this sector, including European consortiums with French participants (EADS, ATR, etc.), foreign manufacturing groups (Finmeccanica, Goodrich, Honeywell, Rockwell Collins etc.), or subcontractors and independent suppliers. Today, they account for nearly half of the sector's turnover. More than 1,500 subcontractors from 30 different countries provide the components, parts, systems and materials for Airbus, while 27 companies from 7 different countries were involved in designing the Falcon 7X, Dassault Aviation's top-of-the-range executive jet.

## 3 SPECIALIST INNOVATION CLUSTERS



### 1. ASTech Paris-Région

**Ile-de-France**

ASTech Paris-Région is the leading French and European cluster in the fields of **executive aviation, space travel and engines/equipment**. It brings together more than 100,000 people and the majority of R&D jobs in the sector in France. Groups and organizations involved in this cluster include: Dassault Aviation, Safran, Astrium, the CNES, and the European Space Agency.

[www.pole-astech.org](http://www.pole-astech.org)

### 2. Aerospace Valley

**Aquitaine / Midi-Pyrénées**

Aerospace Valley is the **leading European employment area (94,000 jobs including 8,500 researchers)** in the aerospace, space travel and embedded systems sector, with a **turnover of €10 billion**. It comprises 220 companies, including a large number of international groups: EADS, Freescale Semiconductors, Goodrich, Honeywell, Rockwell Collins, Siemens etc.

[www.aerospace-valley.com](http://www.aerospace-valley.com)

### 3. Pégase

**Provence-Alpes-Côte-d'Azur**

The Pégase cluster, specializing in the **Aerospace** field, encompasses more than 250 companies, generating a turnover of €5.5 billion and employing 35,000 people, **30% of whom work in research**.

[www.pole-pegase.com](http://www.pole-pegase.com)

(1), (2), (3) source: Gifas  
(4) source: DGCIS