Production

Industrial Organisation

Each task in the building of Airbus aircraft (from design to production) is allocated to a designated plant. The Airbus plants are typically organised around different aircraft components and sections, in component delivery teams. Each component delivery team is either in charge of one aircraft programme, or organised by manufacturing technology clusters depending on the optimum solution for each plant. Every plant is organised with production, engineering, quality, supply chain, manufacturing, engineering and logistics capabilities to ensure a seamless production flow of operations.

A transversal “Industrial Systems” Centre of Competences is in charge of ensuring that harmonised and standardised processes, methods and tools are developed and implemented across the plants, in order to increase efficiency, based on best practices. Another transversal “Manufacturing technologies” Centre of Competences is in charge of disseminating new technologies and innovation in manufacturing across the plants and preparing manufacturing solutions for future product evolutions.

Following production by the respective plants, the various aircraft sections are transferred between the network of sites and the final assembly lines using dedicated transport means, such as the “Beluga” Super Transporters.

Programme management is then responsible for the final assembly line activities. The programme management works closely with the plants to secure delivery of aircraft sections to the final assembly lines on time, cost and quality.

In 2018, construction started on the new FAL in Mobile, Alabama (US) for the A220. The first A220 delivery from Mobile is expected in mid-2020.

Airbus announced the following programme production rates:
- A220 family: by next mid-decade, rate 10 per month targeted in Mirabel and rate 4 per month targeted in Mobile;
- A320 family: rate 60 per month targeted by mid-2019 with a 4th A320 line in Hamburg, Mobile fully on schedule and Tianjin (China) ramping up further;
- A350: rate 10 reached at the end of 2018;
- A380: Airbus expects to deliver 8 aircraft in 2019, 7 in 2020 and the remaining 2 in 2021.

Engineering

Airbus Engineering is a global organisation that develops civil aircraft and aircraft components, and that conducts innovative research applicable to the next generation of aircraft. Airbus Engineering operates transnationally, with most engineers employed in France, Germany, the UK and Spain. A growing population of experienced aerospace engineers is also employed worldwide at five other engineering centres in Wichita (Kansas, US), Mobile (Alabama, US), Moscow (Russia), Bangalore (India) and Beijing (China).

A key part of the Airbus engineering organisation is the architect and integration centre, which ensures, together with a team of senior aircraft architects and the programme chief engineers, that a consistent and multi-disciplinary approach is applied during aircraft development.

Research & Technology activities continue to deliver incremental innovations for existing aircraft, matured breakthrough technologies, with reinforced focus on industrial aspects. Airbus Engineering is a major contributor to numerous international initiatives dedicated to the preservation of the environment and the reduction of noise and CO2 emissions. Fully integrated change projects are also implemented to continuously implement innovative and efficient ways of working.

Regional Aircraft, Aerostructures, Seats and Aircraft Conversion

ATR

ATR (Avions de Transport Régional) is a world leader in the market for regional aircraft up to 90 seats. Its aircraft are currently operated by more than 200 airlines in over 100 countries. ATR is an equal partnership between Airbus and Leonardo, with Airbus’ 50% share managed by Airbus. Headquartered in Toulouse, ATR employs more than 1,400 people. Since the start of the programme in 1981, ATR has registered net orders for 1,717 aircraft (483 ATR 42s and 1,234 ATR 72s).

In 2018, ATR delivered 76 new aircraft (compared to 78 in 2017) and recorded net firm orders for 46 new aircraft (compared to 103 in 2017), including orders from NAC/Silver. As of 31 December 2018, ATR had a backlog of 205 aircraft (compared to 235 in 2017).

Products and Services

ATR 42 and ATR 72. ATR has developed a family of high-wing, twin turboprop aircraft in the 30- to 78-seat market which comprises the ATR 42 and ATR 72, designed for optimal efficiency, operational flexibility and comfort. Like Airbus, the ATR range is based on the family concept, which provides for savings in training, maintenance operations, spare parts supply and cross-crew qualification. ATR is now entering the cargo market as 2018 is the year of the launch of the ATR72/F (Freighter) with a brand new windowless fuselage, a forward Large Cargo Door (LCD) and a rear upper hinged cargo door. First delivery is planned in 2020 to FedEx.

By the end of 2018, ATR had delivered 1,512 aircraft.

Customer service. ATR has established a worldwide customer support organisation committed to supporting aircraft over their service life. Service centres and spare parts stocks are located in Toulouse, Paris, Miami, Singapore, Bangalore, Auckland, Sao Paulo and Johannesburg. ATR worldwide presence also includes representative offices in Beijing and Tokyo.

ATR Asset Management addresses the market for second-hand aircraft by assisting in the placement and financing of used and end-of-lease aircraft. ATR Asset Management activity is marginal today as the leasing market has strongly developed since 2007.

Production

The ATR fuselage is produced in Naples, Italy, and ATR wings are manufactured in Merignac near Bordeaux, France. Final assembly takes place in Saint Martin near Toulouse on the Airbus commercial aircraft production site. Flight-testing, certification and deliveries also occur in Toulouse. ATR outsources certain areas of responsibility to Airbus, such as wing design and manufacturing, flight-testing and information technology.
1.1 Presentation of the Company

Information on the Company’s Activities /

STELIA Aerospace

STELIA Aerospace is a wholly-owned subsidiary of Airbus. It offers global solutions for aeronautical manufacturers and airlines supported by its aerostructure, cabin interior and pilot seats business lines.

As one of the world leading tier-1 aerostructure suppliers, STELIA Aerospace designs and manufactures fully integrated aircraft sections for civil and military programmes.

From aircraft wings and fuselage sections, to fully equipped and tested work packages, STELIA Aerospace is a global partner for major aeronautical players worldwide, such as Airbus, ATR, or Bombardier Aerospace.

With more than 7,000 employees worldwide, working within 11 Centres of Excellence based in France, Canada, Morocco and Tunisia, STELIA Aerospace has a wide range of capabilities, from Build-to-Print to Design & Build solutions, including mechanical milling of rolled and stretched panels and tubes & pipes covering all ATA systems.

Through its cabin interior specialty, STELIA Aerospace designs and manufactures luxury First Class and Business Seats for key partners in the world including Etihad Airways, Singapore Airlines or Thai Airways.

By combining innovative materials and technology with a drive to improve the passenger experience, STELIA Aerospace has created an outstanding range of seats used in civil aircraft globally.

STELIA Aerospace – a joint world leader Pilot seats manufacturer – provides cockpit and pilot seats for all kinds of aircraft, and offers support from design to production, including after-sales service.

As part of its development strategy, STELIA Aerospace has taken a majority stake in Portalliance Engineering end of 2018. Portalliance Engineering is an SME founded in 2006 and focuses on modelisation and digital simulation of structural calculation. This acquisition will enable STELIA Aerospace to benefit sustainably from innovative digital solutions and strengthen its position on the aerostructure market.

Premium AEROTEC

Premium AEROTEC is a wholly owned subsidiary of the Company (consolidated within Airbus), is one of the world’s leading tier-1 suppliers of commercial and military aircraft structures and is a partner in the major European international aerospace programmes.

Its core business is the development and production of large aircraft components from aluminum, titanium and carbon fiber composites (CFRP). Premium AEROTEC is Europe’s no. 1 in this segment with roughly 10,000 employees at various sites in Germany and Romania. Premium AEROTEC is represented by its products in all Airbus commercial aircraft programmes. The current military programmes include the Eurofighter “Typhoon” and the new military transport aircraft A400M.

Besides main customer Airbus, Premium AEROTEC will further intensify business with other customers and actively approach other aircraft or structural manufacturers. Premium AEROTEC is also striving to expand its maintenance, repair and spare parts business.

In order to contribute successfully to the shaping of the future of aviation, the engineers and developers at Premium AEROTEC are continuously working on the new and further development of lightweight and highly durable aircraft structures. They cooperate closely with universities and research institutes in the process. Premium AEROTEC plays a significant role in the design of new concepts in such fields as carbon composite technologies (incl. thermoplastic processes) or 3D-printing of aircraft components made of titanium or aluminum.

Elbe Flugzeugwerke GmbH — EFW

EFW combines various aviation and technology activities under a single roof: development and manufacturing of flat fibre-reinforced composite components for structures and interiors, the conversion of passenger aircraft into freighter configuration, maintenance and repair of Airbus commercial aircraft as well as engineering services in the context of certification and approval.

On 17 June 2015, Airbus signed an agreement with Singapore-based ST Aerospace Ltd. (STA) to offer passenger-to-freighter (P2F) conversion solutions for its A320 and A321 aircraft. STA acquired an additional 20% of the shares of EFW, Dresden (Germany) by way of a contribution in kind and a capital increase to EFW. The transaction closed on 4 January 2016. Consequently, 45% of the shares of EFW were retained and Airbus effectively lost its control over EFW (previously reported in Airbus).

1.1.3 Helicopters

Airbus Helicopters is a global leader in the civil and military rotorcraft market, offering one of the most complete and modern ranges of helicopters and related services. This product range currently includes light single-engine, light twin-engine, medium and medium-heavy rotorcraft, which are adaptable to all kinds of mission types based on customer needs. See “— 1.1.1 Overview” for an introduction to Airbus Helicopters.

Strategy

Airbus Helicopters’ strategy is to continue driving improvement initiatives via its company-wide digital transformation plan, which places customer satisfaction, quality and safety at the core of its operations, along with increasing industrial competitiveness.

A Commitment to Innovation

Development of the next-generation H160 medium helicopter – the first of the “H Generation” – is ongoing at a steady pace.