

# Report on airbus

[Environment](#), [Air](#)



Airbus Industrie began as a consortium of European aviation firms to compete with American companies such as Boeing, McDonnell Douglas, and Lockheed. While many European aircraft were innovative, even the most successful had small production runs.

In 1991, Jean Pierson, then CEO and Managing Director of Airbus Industrie, described a number of factors which explained the dominant position of American aircraft manufacturers: the land mass of the United States made air transport the favoured mode of travel; a 1942 Anglo-American agreement entrusted transport aircraft production to the US; and World War II had left America with " a profitable, vigorous, powerful and structured aeronautical industry. For the purpose of strengthening European co-operation in the field of aviation technology and thereby promoting economic and technological progress in Europe, to take appropriate measures for the joint development and production of an airbus. "

Airbus Mission Statement In the mid-1960s, tentative negotiations commenced regarding a European collaborative approach. Individual aircraft companies had already envisaged such a requirement; in 1959 Hawker Siddeley had advertised an " Airbus" version of the Armstrong Whitworth AW. 60 Argosy, which would " be able to lift as many as 126 passengers on ultra short routes at a direct operating cost of 2d. per seat mile. "

However, European aircraft manufacturers were aware of the risks of such a development and began to accept, along with their governments, that collaboration was required to develop such an aircraft and to compete with the more powerful US manufacturers. At the 1965 Paris Air Show major

European airlines informally discussed their requirements for a new "airbus" capable of transporting 100 or more passengers over short to medium distances at a low cost.

The same year Hawker Siddeley (at the urging of the UK government) teamed with Breguet and Nord to study airbus designs. The Hawker Siddeley/Breguet/Nord group's HBN 100 became the basis for the continuation of the project. By 1966 the partners were Sud Aviation, later Aerospatiale (France), Arbeitsgemeinschaft Airbus, later Deutsche Airbus (Germany) and Hawker Siddeley (UK). A request for funding was made to the three governments in October 1966. [11] On 25 July 1967 the three governments agreed to proceed with the proposal.

In the two years following this agreement, both the British and French governments expressed doubts about the project. The MoU had stated that 75 orders must be achieved by 31 July 1968. The French government threatened to withdraw from the project due to the concern over funding development of the Airbus A300, Concorde and the Dassault Mercure concurrently, but was persuaded otherwise. Having announced its concern at the A300B proposal in December 1968, and fearing it would not recoup its investment due to lack of sales, the British government announced its withdrawal on 10 April 1969.

Germany took this opportunity to increase its share of the project to 50%. Given the participation by Hawker Siddeley up to that point, France and Germany were reluctant to take over its wing design. Thus the British company was allowed to continue as a privileged subcontractor. Hawker

Siddeley invested GB£ 35 million in tooling and, requiring more capital, received a GB£ 35 million loan from the German government. Formation of Airbus Industrie Airbus A300, the first aircraft launched by Airbus.

Airbus Industrie was formally established as a Groupement d'Interet Economique (Economic Interest Group or GIE) on 18 December 1970. It had been formed by a government initiative between France, Germany and the UK that originated in 1967. The name "Airbus" was taken from a non-proprietary term used by the airline industry in the 1960s to refer to a commercial aircraft of a certain size and range, for this term was acceptable to the French linguistically. Aerospatiale and Deutsche Airbus each took a 36. % share of production work, Hawker Siddeley 20% and Fokker-VFW 7%.

Each company would deliver its sections as fully equipped, ready-to-fly items. In October 1971 the Spanish company CASA acquired a 4. 2% share of Airbus Industrie, with Aerospatiale and Deutsche Airbus reducing their stakes to 47. 9%. In January 1979 British Aerospace, which had absorbed Hawker Siddeley in 1977, acquired a 20% share of Airbus Industrie.

The majority shareholders reduced their shares to 37. 9%, while CASA retained its 4. % Development of the Airbus A300 Main article: Airbus A300 Eastern Air Lines was Airbus's first customer in the American market, ordering the Airbus A300 B4. The Airbus A300 was to be the first aircraft to be developed, manufactured and marketed by Airbus. By early 1967 the "A300" label began to be applied to a proposed 320 seat, twin engined airliner. Following the 1967 tri-government agreement, Roger Beteille was appointed technical director of the A300 development project.

Beteille developed a division of labour which would be the basis of Airbus' production for years to come: France would manufacture the cockpit, flight control and the lower centre section of the fuselage; Hawker Siddeley, whose Trident technology had impressed him, was to manufacture the wings; Germany should make the forward and rear fuselage sections, as well as the upper centre section; the Dutch would make the flaps and spoilers; finally Spain (yet to become a full partner) would make the horizontal tailplane.

On 26 September 1967 the German, French and British governments signed a Memorandum of Understanding in London which allowed continued development studies. This also confirmed Sud Aviation as the "lead company", that France and the UK would each have a 37.5% workshare with Germany taking 25%, and that Rolls-Royce would manufacture the engines. In the face of lukewarm support from airlines for a 300+ seat Airbus A300, the partners submitted the A250 proposal, later becoming the A300B, a 250 seat airliner powered by pre-existing engines.

This dramatically reduced development costs, as the Rolls-Royce RB207 to be used in the A300 represented a large proportion of the costs. The RB207 had also suffered difficulties and delays, since Rolls-Royce was concentrating its efforts on the development of another jet engine, the RB211, for the Lockheed L-1011 and Rolls-Royce entering into administration due to bankruptcy in 1971. The A300B was smaller but lighter and more economical than its three-engined American rivals.

We showed the world we were not sitting on a nine-day wonder, and that we wanted to realise a family of planes...we won over customers we wouldn't

otherwise have won... now we had two planes that had a great deal in common as far as systems and cockpits were concerned. " Jean Roeder, chief engineer of Deutsche Airbus, speaking of the A310[17] In 1972, the A300 made its maiden flight and the first production model, the A300B2 entered service in 1974;[24]though the launch of the A300 was overshadowed by the similarly timed supersonic aircraft Concorde.

Initially the success of the consortium was poor,[ but orders for the aircraft picked up,[27][28] due in part to the marketing skills used by Airbus CEO Bernard Lathiere, targeting airlines in America and Asia By 1979 the consortium had 256 orders for A300, and Airbus had launched a more advanced aircraft, the A310, in the previous year. It was the launch of the A320 in 1981 that guaranteed the status of Airbus as a major player in the aircraft market – the aircraft had over 400 orders before it first flew, compared to 15 for the A300 in 1972. Transition to Airbus SAS

Airbus A340 introduced in 1992 Airbus A330 introduced in 1994 The retention of production and engineering assets by the partner companies in effect made Airbus Industrie a sales and marketing company. This arrangement led to inefficiencies due to the inherent conflicts of interest that the four partner companies faced; they were both GIE shareholders of, and subcontractors to, the consortium. The companies collaborated on development of the Airbus range, but guarded the financial details of their own production activities and sought to maximise the transfer prices of their sub-assemblies.

It was becoming clear that Airbus was no longer a temporary collaboration to produce a single plane as per its original mission statement, it had become a long term brand for the development of further aircraft. By the late 1980s work had begun on a pair of new medium-sized aircraft, the biggest to be produced at this point under the Airbus name, the Airbus A330 and the Airbus A340. In the early 1990s the then Airbus CEO Jean Pierson argued that the GIE should be abandoned and Airbus established as a conventional company.

However, the difficulties of integrating and valuing the assets of four companies, as well as legal issues, delayed the initiative. In December 1998, when it was reported that British Aerospace and DASA were close to merging, Aerospatiale paralysed negotiations on the Airbus conversion; the French company feared the combined BAe/DASA, which would own 57.9% of Airbus, would dominate the company and it insisted on a 50/50 split. ]However, the issue was resolved in January 1999 when BAe abandoned talks with DASA in favour of merging with Marconi Electronic Systems to become BAE Systems.

Then in 2000 three of the four partner companies (DaimlerChrysler Aerospace, successor to Deutsche Airbus; Aerospatiale-Matra, successor to Sud-Aviation; and CASA) merged to form EADS, simplifying the process. EADS now owned Airbus France, Airbus Deutschland and Airbus Espana, and thus 80% of Airbus Industrie. BAE Systems and EADS transferred their production assets to the new company, Airbus SAS, in return for shareholdings in that company.

Development of the A380 Main article: Airbus A380 In mid-1988 a group of Airbus engineers led by Jean Roeder began working in secret on the development of an ultra-high-capacity airliner (UHCA), both to complete its own range of products and to break the dominance that Boeing had enjoyed in this market segment since the early 1970s with its 747 The project was announced at the 1990 Farnborough Air Show, with the stated goal of 15% lower operating costs than the 747-400. [ Airbus organised four teams of designers, one from each of its partners (Aerospatiale, DaimlerChrysler Aerospace, British Aerospace, CASA) to propose new technologies for its future aircraft designs.

In June 1994 Airbus began developing its own very large airliner, then designated as A3XX. Airbus considered several designs, including an odd side-by-side combination of two fuselages from the Airbus A340, which was Airbus's largest jet at the time. Airbus refined its design, targeting a 15 to 20 percent reduction in operating costs over the existing Boeing 747-400. The A3XX design converged on a double-decker layout that provided more passenger volume than a traditional single-deck design. Five A380s were built for testing and demonstration purposes.

The first A380 was unveiled at a ceremony in Toulouse on 18 January 2005, and its maiden flight took place on 27 April 2005. After successfully landing three hours and 54 minutes later, chief test pilot Jacques Rosay said flying the A380 had been " like handling a bicycle". On 1 December 2005, the A380 achieved its maximum design speed of Mach 0. 96. On 10 January 2006, the



A380 made its first transatlantic flight to Medellin in Colombia. Airbus A380, the largest passenger jet in the world, entered commercial service in 2007.

On 3 October 2006, CEO Christian Streiff announced that the reason for delay of the Airbus A380 was the use of incompatible software used to design the aircraft. Primarily, the Toulouse assembly plant used the latest version 5 of CATIA (made by Dassault), while the design centre at the Hamburg factory were using the older and incompatible version 4. The result was that the 530 km of cables wiring throughout the aircraft had to be completely redesigned. Although no orders had been cancelled, Airbus still had to pay millions in late-delivery penalties.

The first aircraft delivered was to Singapore Airlines on 15 October 2007 and entered service on 25 October 2007 with an inaugural flight between Singapore and Sydney. Two months later Singapore Airlines CEO Chew Choong Seng said that the A380 was performing better than both the airline and Airbus had anticipated, burning 20% less fuel per passenger than the airline's existing 747-400 fleet. Emirates was the second airline to take delivery of the A380 on 28 July 2008 and started flights between Dubai and New York on 1 August 2008. ] Qantas followed on 19 September 2008, starting flights between Melbourne and Los Angeles on 20 October 2008.