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The Airbus A380, also known as Superjumbo, is the largest passenger airplane ever manufactured in the world.

The plane has four engines, a wide double deck body and an upper deck that spans the whole fuselage length. Its big size can accommodate 525 passengers divided into the usual three classes or maximum of 853 passengers if it were to be made into an all-economy class arrangement (Norris & Wagner, 131). This essay will explore the supply chain of the Airbus A380.

### **The A380 manufacture and assembly**

Being such a gigantic plane, manufacturing the airbus A380 at a single point can be very cumbersome as it would be almost next to impossible to come up with a manufacturing plant that would be huge enough to accommodate the building of the airbus A380. For this reason, the various parts of this plane are built at different locations in Europe and then transported for assembly at Toulouse in France. The plane's main components are manufactured in the UK, Germany, Spain and France by various companies five largest being Safran, Goodrich, Rolls-Royce, General Electric and United Technologies. Being a huge plane, the A380 is mostly constructed from light but strong materials that hold the plane's weight together without making it too heavy to fly (Ireland, Hoskisson & Hitt, 37).

Composite materials make up to a fifth of the plane's airframe while reinforced plastics made of carbon, glass and quartz fibres are utilized mostly in the making of the wings, doors, tail surfaces and the fuselage pieces such as the rear end and undercarriage sections. The manufacture of

the airbus A380 components begin in Germany from where they are transported to France via the UK. The tailfin, which is manufactured in the German city of Stade, and cabin installations together with the front and back fuselage parts, which are built in Hamburg, are transported to the shipping docks and shipped to the UK at the Mostyn port.

The UK manufacturers the wings of the airbus A380 in its cities of Broughton and Bristol, which are both located in Wales (Boddy, 687). The wings are then afterwards transported by barges over Dee-Dee River from the factories to the port of Mostyn where they are loaded into the cargo ship containing the other components from Germany. The cargo ship then leaves for France and docks at the port of Saint Nazarie. The components are then unloaded and used to assemble bigger plane sections including the cockpit, sub-assemblies and the nose. The airplane's nose is built in Saint Nazarie while the cockpit and the fuselage sub-assemblies are manufactured in Meaulte. The larger components are then reloaded to the ship which transports them to Bordeaux where they are finally unloaded and be moved by a barge to Langon. From Langon, the parts are loaded on trucks and transported by road to Toulouse (Norris & Wagner, 93).

From Bordeaux, the ship sails to Spain to collect the other major parts. The rudder and the horizontal tail plane are built in Spain in the cities of Puerto Real and Getafe respectively. These are then loaded onto the ship and transported to France. The Aircrafts engines, which are built by Rolls-Royce in partnership with Pratt & Whitney and General electric, and the other smaller parts that are manufactured in many other countries including the US, are also brought moved to France.

All the components are then transported to Toulouse where they are assembled to form the airbus A380 (Liyanage, Wink and Nordberg, 114). After assembly, the airbus A380 is tested and then flown to Hamburg where it is furnished and painted according to the specifications of the buyer. The plane is now ready for commercial use. The diagram below illustrates the airbus A380's supply chain. Source: Wapedia. mobi

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