

## Airbus achieves A380 first flight on schedule with help from IBM.

---

### Overview

---

#### ■ **Business Challenge**

*To meet tight deadlines for delivery and reduce design and manufacturing costs by constantly improving working processes throughout the aircraft lifecycle.*

#### ■ **Solution**

*IBM Global Business Services provided a flexible, scalable team of experts that included strategic business consultants, aircraft industry specialists and project managers to define and implement transformation programs in business, financial and organizational disciplines.*

#### ■ **Key Benefits**

- *€18 million savings through improved collaboration with suppliers*
- *36 percent reduction in wing lead time*



Airbus leads the world in developing new technologies and pushing the boundaries of knowledge in the aerospace industry. Nowhere is this more evident than in its design and development of the A380, the world's largest passenger jet. Airbus is a highly complex business, employing advanced technologies and processes, some of which have specifically been developed for this project. In such a large-scale, innovative design and manufacturing operation, much attention is paid to keeping costs under control.

*“We value the partnership with IBM for its objectivity and willingness to challenge our thinking. They are an enormous think tank we can draw on.”*

– Iain Gray, Managing Director,  
Airbus UK

### Business Benefits

- Improved collaboration with suppliers eliminated data re-entry, saving €18 million on collaboration with suppliers
- Improved concurrent engineering reduced lead time on wing by 41 weeks (36 percent reduction)
- First flight of world's largest passenger aircraft completed on time
- Program kept on schedule
- Innovative practices introduced for concurrent engineering and collaborative working

*“IBM has an important ongoing role in delivering performance improvements. It is extremely valuable for us to be able to call on such an integrated team of specialists to conduct thorough analyses of problem areas and respond quickly with solutions to help us keep things on track.”*

– Iain Gray

One of the most complex parts of the aircraft is the wing assembly, an element for which Airbus UK has the design and manufacturing responsibility. The company realized early in the A380 program that new processes would be needed to achieve the aggressive timeline for the airplane. “We needed to radically transform our approach to the A380, and saw value in bringing in an objective external consultancy to help define and implement new ways of working,” says Iain Gray, Managing Director of Airbus UK.

### Ideas tank

Airbus UK commissioned IBM Global Business Services to bring together a team of experts to analyze designs, design processes and manufacturing operations. “IBM is uniquely placed to advise and help us transform Airbus UK,” says Gray. “It has enormous breadth and depth of knowledge, with expertise in business, financial and organizational disciplines as well as the aircraft industry and computer technology.”

The core IBM Global Business Services program team includes strategic business consultants, aircraft industry specialists and project managers. This team is expanded as required by drafting in consultants and specialists who bring a complete cross-section of business and technical skills relevant to the specific problem being addressed.

“We value the partnership with IBM for its objectivity and willingness to challenge our thinking. They are an enormous think tank we can draw on,” says Gray. “The IBM Global Business Services team shares our commitment to the Airbus programs and is highly responsive. We call on specialists in particular disciplines to address particular problems, and they inject pace into finding and implementing solutions using proven processes.”

### Designing out cost

“Initiatives from IBM Global Business Services help us drive cost out of design and manufacture, improve collaborative working, and transform the way we work with our many subcontractors,” explains Gray. Improved collaboration with suppliers eliminated data re-entry, saving €18 million. The IBM team has also helped Airbus UK improve concurrent engineering, reducing lead time on the wing by 41 weeks (36 percent reduction).

Sometimes, initiatives originated directly from the IBM team. Airbus built complete 3D models of A380 components to analyze clash conditions in airframe systems and structure before committing to cut metal—for example, to ensure that there were adequate clearances for slat and flap mechanisms on the wing and the landing gear. Such large-scale 3D modeling involves an enormous volume of number-crunching, which would normally trigger the purchase of large processors. Seeing this situation, IBM consultants introduced Airbus to the concept of GRID computing, which pools unutilized processing capacity in hundreds of distributed workstations for use with processor-intensive applications. A prototype was developed, and IBM has now completed the implementation of GRID technology, saving Airbus a considerable investment.

In the area of business transformation, IBM Global Business Services is deploying an experienced team of human resource and organizational specialists to help Airbus UK transform from a development organization to one undertaking large-scale serial production.

A key factor in the success of the A380 program is educating several hundred people across Airbus UK and its many subcontractors in the new tools, processes and collaborative working. With a vast pool of resources, IBM responded very quickly to Airbus' training needs, building and delivering tailored courses that reflect the processes and technologies defined at the strategic level.

### **Ongoing partnership**

With design developments and performance improvement a permanent feature of any successful airliner program, IBM provides value across the product lifecycle, which could span several decades. "IBM has an important ongoing role in delivering performance improvements," concludes Gray. "It is extremely valuable for us to be able to call on such an integrated team of specialists to conduct thorough analyses of problem areas and respond quickly with solutions to help us keep things on track."

### **For more information**

Please contact your IBM sales representative or IBM Business Partner.

Visit us at:

[ibm.com/innovation](http://ibm.com/innovation)

---

## **Key Components**

---

*Services*

IBM Global Business Services

---

---

## **Why it matters**

---

*To meet tight deadlines while also cutting design and manufacturing costs for the new Airbus A380, Airbus UK and an IBM team created new business, financial and organizational processes. The changes transformed the airplane manufacturers' methodology, enabling Airbus UK to cut cost and time out of design and manufacture, improve collaboration with suppliers and deliver key components on schedule to ensure the A380 aircraft's on-time first flight.*

---



© Copyright IBM Corporation 2006

IBM Corporation  
Global Solution Sales  
New Orchard Road  
Armonk, NY 10504  
U.S.A.

Produced in the United States of America  
11-06  
All Rights Reserved

IBM, the IBM logo and [ibm.com](http://ibm.com) are trademarks or registered trademarks of International Business Machines Corporation in the United States, other countries, or both.

Other company, product or service names may be trademarks or service marks of others.

References in this publication to IBM products or services do not imply that IBM intends to make them available in all countries in which IBM operates.