



'THE MARKET FOR CONCORDE WAS NEVER THERE'

INTERVIEW *Andreas Spaeth*
PHOTOS *Author unless noted*

Airways: What were the biggest achievements of Concorde?

Jean-Louis Châtelain: The achievements of Concorde, in hindsight, were better than expected. It was a total challenge at the beginning, but they achieved their technical objectives and it worked perfectly for 25 years with advanced technology, like fly-by-wire and carbon brakes. It was the first cross-border project ever. It was an international adventure with the French and the British, and we learned a lot from that. It was the start of Airbus and wider international projects in general.

For everybody, having this Concorde experience was an advantage. Concorde taught the French how to run and manage an international project. Airbus would not be Airbus without Concorde. It was such an advanced aircraft that Airbus just had to make an extrapolation of it. Of course, fly by wire, for Airbus, was not based on analog computers, but digital ones.

Was there ever a realistic chance for supersonic travel to become a major market?

Concorde was not based on a business plan. The decision was taken, at the French Government

level, to run it as an advanced project—as was the decision for nuclear submarines and for the establishment of the space center in French Guyana. Speed has an effect on trip fuel costs; so, if you take the marketing approach, it was bound to fail. And it was intended to fly supersonic over land, which was not allowed then because of the sonic boom.

In the end, the Americans took the logical decision to pull out, and the British and French kept this big project. But, if you look at the figures, they show the market was not there, it was never there. During my time, we only had about 30 to 40 passengers on every Concorde flight.

In the late 1990s, there were plans to extend the life of Concorde until the second decade of the new millennium. Why? And was that realistic?

I do confirm that the plan was to extend the life of the aircraft from the airworthiness point of view and, before the crash, there were already negotiations to extend the life of Concorde until 2017. You cannot measure the image benefit of flying Concorde, both for Air France and British Airways, but there was a real benefit in that respect.

THE AÉROSPATIALE/BAC CONCORDE WAS ONCE THE EPITOME OF AIRCRAFT DESIGN AND A STATUS SYMBOL FOR THE WORLD'S ELITE TRAVELERS. HOWEVER, AFTER AIR FRANCE FLIGHT AF4590 CRASHED ON JULY 25, 2000, WHAT WAS THE WORLD'S FIRST AND ONLY SUPERSONIC AIRLINER MET A PREMATURE END.

AIRWAYS INTERVIEWED CAPTAIN JEAN-LOUIS CHÂTELAIN, WHO JOINED AIR FRANCE IN 1970 AND SAT IN THE CONCORDE'S LEFT SEAT BETWEEN 2001 AND 2003, WHEN IT WAS RETIRED. CHÂTELAIN FLEW 92 NORTH ATLANTIC SUPERSONIC CROSSINGS. IN TOTAL, HE LOGGED ABOUT 400 HOURS ON CONCORDE—260 OF THEM SUPERSONIC. AND HE WAS ALSO PART OF THE AF4590 INVESTIGATION BOARD, WHICH LASTED OVER A YEAR.



We had people flying Concorde that were frequent fliers in First Class because they flew Concorde from Europe to the US. It brought additional revenue in this way. And, because of the image the aircraft was carrying, it was adding to the value of the brand of the two operators. From that point of view, it was not unthinkable to extend the life of the aircraft.

Can you sum up the sequence of events that led to the accident?

I was a member of the accident investigation team and it took one year of my life. The scenario was a sequence of events. Like in most aircraft accidents, the triggering event was not proportionate to its consequences. Here, it was a 200-gram piece of metal that made a clear cut into the tire at high speed. That provoked a tire burst, with a huge piece of tire impacting the wing, and then you had this shockwave developing in the tank, and the tank ripping open from the inside to the outside—causing a massive fuel leak and a blaze of fire, leading to the loss of power in two engines, which no aircraft is certified to withstand. We were able to objectively reconstruct the sequence of events.

The witness accounts stating that there was a fire before the tank burst were honest but wrong. We all know how human witnesses can err. The fact that all this happened in that way was incredible and very random. They tried to reproduce the cutting of the tire in the investigation. They found that, depending on the angle of attack of the tire on this little metal piece, it would cut or not.

Once two engines had failed, it was impossible to recover the aircraft because of the characteristics of Concorde's delta wings. The drag is so tremendous at low speed that you need extra power to get above the critical speed. If you don't have that power coming from the engines running with lit afterburners at takeoff, you are lost as you lose speed. That was the situation they were in.

Did the modifications after the accident improve Concorde's safety?

Definitely. The new radial tires were amazing. We had two incidents after the introduction of the radial tires, one at each airline. In both cases, the tires ran over metal parts—in the case of British Airways it was parts of an oxygen



bottle, for whatever reason. The aircraft was able to take off and land, with tremendous stress on the tires, while the piece of metal was still embedded in the tire. That tells a lot of the improvement of the new tires and their technology brought.

For the new Kevlar lining of the tank interior, there is no proof of its effect, but I assume it was an improvement. All the highly publicized incidents after the crash were nothing extraordinary, just that they got so much more attention then.

What can you say about the end of Concorde?

The decision to end Concorde's active life was taken not by the aviation authorities or even Airbus, which had inherited the role of the manufacturer from Aérospatiale, but at the government level in both France and the UK, at the ministries of transportation. And of course, Airbus had other priorities, with its upcoming A380 at the time, than taking the assets of Aérospatiale and investing in the airworthiness of Concorde, for sure. But the ones who had to push through the decision were the airworthiness authorities.

First, they suspended the type certificate for some 15 months, then they stated they wouldn't issue a follow-up airworthiness certificate. This killed operations

for both the British and the French. My understanding was that the airworthiness follow-up would have to be done much more on the French than on the British side.

Do you think it would be good to have a supersonic airliner again in the future?

I don't think so. We have every other opportunity to work on advanced technology. I think we have passed a landmark in aviation; we have exited the pioneering age, where we could claim progress in safety, speed, etc. every year. It has become an industry for the benefit of most people. I think there is no cause for taking people to Mach 2 again. Nowadays, what would justify crossing the Atlantic in three hours instead of eight hours for the cost of a huge impact on the planet?

At the same time, we have every kind of technological means to communicate or to perform surgery even from remote places. The big human

On June 24, 2003, Jean-Louis Chatelain was at the controls while delivering Concorde F-BVFB from Paris DCG to Karlsruhe-Baden (FKB) Airport in Germany. The aircraft was dismantled and hauled to the Auto & Technik Museum Sinsheim, near Heidelberg; the only place in the world where both Concorde and its Soviet rival Tupolev Tu-144 can be inspected side-by-side.

enterprises are based on a just cause. And I don't think there is any just cause anymore for supersonic flights.

Before, we were in a phase of achieving more progress every year, and speed was seen as progress at the time. When Concorde started service in 1976, I was based, as a young Boeing 707 Pilot, in Lima, Peru, and I didn't have communication with my family for three months. Understandably, not only speed was seen as progress at the time, but the achievement of taking a flight from one side of the Atlantic to the other in a very short time could be an acceptable cause for coming up with supersonic travel. But nowadays, we just lack a justifiable cause. 🤖

