

editorial



A Tribute to Bernard Ziegler

In each era of aviation, there are people who pioneer an idea with such conviction that the industry as a whole will benefit from it. Working for Bernard Ziegler (a.k.a “BZ” as he was called by all who knew him), I witnessed first-hand his passion for flight, his relentless innovative spirit, and the power of his convictions. The most visible legacy from BZ is certainly the benefits of flight envelope protection enabled by Fly-By-Wire (FBW) technology on commercial jet aircraft.

BZ believed that this step change would significantly reduce the risk of loss of control in-flight. The FBW technology was thus first introduced on the Airbus A320 and it is the baseline for every Airbus aircraft produced since. Beyond the Airbus fleet, it is the industry standard today for all new aircraft types.

The facts demonstrate BZ’s vision was absolutely correct, that FBW would significantly reduce the accident rate. Indeed, aircraft with flight envelope protection enabled by FBW technology that belong to the current fourth generation of commercial jets have an impressive record. Today there are around 15,500 in operation, with 11,600 (or 75%) of which are Airbus FBW aircraft. Fourth-generation aircraft

have completed more than 212 million flights and accumulated over 500 million flight hours (172 million flights and 375 million flight hours by Airbus aircraft) over the last 33 years.

This has resulted in a historically low rate of 0.04 fatal accidents per million flights (10-year moving average) compared with the rate of 0.15 for the previous third-generation aircraft without FBW. To follow on from BZ's focus on the reduction of accidents caused by loss of control in-flight (LOC-I), the current LOC-I accident rate 0.01 for fourth-generation jets is a seven-fold decrease when compared with the rate of 0.07 LOC-I accidents per million flights for third-generation jets.

More than thirty years on, we can reflect on the occasions when persistence over the resistance to change required the characteristic tenacity of someone like BZ, to win over the sceptics and gain support for his vision. The foundations for aviation to make a leap forward in safety are often laid by such visionaries. It is then our duty to constantly reinforce their legacy through collaboration across our industry, and through the implementation of incremental safety improvements on our aircraft and for how they are operated.

I join my Airbus colleagues, and together with so many across our industry, in paying tribute to Bernard Ziegler - a true pioneer and inspiration for aviation safety.

Chapeau bas Bernard

Yannick MALINGE

SVP & Chief Product Safety Officer



Bernard Ziegler joined Airbus as its chief test pilot in 1972 and he flew the first flight of the first A300. The programme later became an early testbed for FBW which transfers the pilot's commands to the aircraft via digital signals. FBW provides significant benefits through commonality, improved flight safety, reduced pilot workload, fewer mechanical parts, and real-time monitoring of all aircraft systems.

He also flew the A310, A320 and A340-200. In June 1993, Ziegler participated in the longest flight ever undertaken by a civil aircraft, when an A340-200, dubbed the "World Ranger", flew around the world from Paris with just one stop in Auckland in just over 48 hours. Up until his retirement in December 1997, Ziegler was Airbus Senior Vice President of Engineering.

Airbus Fly-By-Wire Visionary Bernard Ziegler Passes Away

(Airbus Press Release - [LINK](#))