

# Speed, the final frontier and implications for the industry

In the first part of two articles, Adam Pilarski, senior vice-president at Avitas, explains why airlines' quest for speed will come back as a major technological drive in the years to come.

Humans have dreamt forever of being like birds and soaring in the air. Finally, more than 100 years ago, on 17 December 1903, the Wright brothers succeeded with a flight covering just 120 feet, about the length of a Boeing 737. Since then, big progress has been achieved: last year, for the first time in recorded history, the aviation industry carried more than four billion paying passengers (out of a population of 7.5 billion) over vast distances. This does not mean that half of all people fly annually (some of us fly many times) but the progress in a little over a century is still tremendous.

The Wright brothers' original flight in 1903 was not of a paying passenger. For that, we had to wait another decade when, on 1 January 1914, Tony Jannus flew the first paying passenger between St Petersburg and Tampa in Florida.

Progress manifested itself not just by the number of passengers. Tremendous advances were made in safety and flight comfort. Those readers who ever took a demonstration flight on a historic magnificent aircraft such as the Douglas DC3, with big seats and fancy food, can surely attest that such first-class flight falls short of even the cheapest low-cost carrier (LCC) flight of today.

The turbulence is difficult to stomach for people used to today's standard of comfort. Indeed, the cabin crew at the time were all registered nurses so they could help the air sick and to provide medical support to those injured in the frequent crashes. Safety and comfort (turbulence, not seat pitch) have advanced to very high levels deemed socially appropriate by our standards.

Speed was one of the parameters that many assumed would be pursued relentlessly after achieving safety. By the time of commercial passenger jets, about half a century after the first flight, the speed of flight increased about 10 fold compared with the early flights.

The next half a century, though, did not show any improvement in speed. Indeed, because of operational considerations, aircraft fly slower today than they did half



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a century ago. In the intervening years, we have shelved the desire to fly at ever-increasing speeds and moved into a period I would call "democratisation of flight". All technological improvements strive to bring aviation to the masses, not to please them but to make money.

Starting with the introduction of widebody aircraft, all developments went to getting more revenue passenger kilometres from the same aircraft. New engines, new materials, weight reductions all point to the goals of airlines carrying more people a further distance at a price acceptable to existing income levels of the population. This explains the four billion passengers last year who could afford to fly.

We, the aviation aficionados, are unhappy with the direction technology has evolved because speed is sexy, efficiency less so. More people are flying as wealth has grown and spread across the world. Technology continues to advance to keep reductions in operating costs drifting lower. All this leads the industry to look for ways to expand traffic in order to increase profits, not only by flying more passengers but also by getting more per flyer.

Advances in first-class (now often called business-class) services are astounding. Those willing can create their own environment on an aircraft. Lie-flat beds are becoming standard for those up front.

Airlines have come up with showers, private suites and other luxuries that allow them to enhance their revenue. So why not go after the most basic essence of flight, namely the time it takes to arrive at a destination (speed)? By definition, this applies to those willing to pay more since they value their time the most. This explains the increase of talk about new supersonic passenger aircraft.

Some airlines (LCCs) still see it as their goal to expand traffic by reducing costs. Others are attempting to curtail demand and concentrate on increasing ticket prices (a strategy favoured by legacy carriers).

Better service or bigger seats sometimes can accomplish higher revenue per passenger. For many decades, though, airlines did not venture into the realm of speed – charge passengers more for reducing flying time.

I believe that the long forgotten quest for speed will come back as a major technological drive in the years to come. The aviation industry will move towards providing value to passengers by reducing flying time and charging the ever-wealthier population for it.

This inevitable development will open many opportunities. A fascinating future awaits us with many questions still not answered, such as at what speed will we fly and what is the future of first class? ▲