

AEROSPACE TECHNOLOGY: CRYSTAL BALL GAZING

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ABSTRACT

Go to any aerospace technology conference these days and it is a fair bet that some presenter will mention the increasing rate of change of technology and the disruptive engineering innovation we are now facing – a cliché familiar to many. Exponential change they claim, is transforming our lives in ways we cannot imagine and it is speeding up thanks to the Internet of Things, 'big data' and the digital transformation of our lives.

To those in aerospace, it is prudent to ask the question: "Looking back with perhaps a longer memory, are we really accelerating faster than our immediate ancestors, when someone who was alive at the time of Wright brothers first flight, may have also witnessed Armstrong stepping onto the Moon a mere 66 years later?"

Some 48 years on from the crowning glory of Apollo – some might argue we are going backwards – Mach 3 Spy Planes and Mach 2 airliners are retired, along with the Space Shuttle reusable space plane leaving us humans stuck in the subsonic regime.

In 2017 Boeing delivered the first 737 MAX – an updated (and highly efficient) variant of an aircraft that has already celebrated its 50th birthday. In recent years, the roll-outs of the B-787, A350, F-35 and the conservative re-engineing of the A320 and B-737s have led some industry observers to glumly predict a decade of the same aircraft BUT there are certainly recent signs that we are entering a new golden age of aerospace innovation.

Gazing into the Aerospace Technology Crystal Ball looks at some of the challenges currently facing scientists and engineers in an environment in which no idea or proposed solution is too fanciful.