

Airbus launches extra high performance wing demonstrator to fortify decarbonisation ambition

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Toulouse, 22 September 2021 – Airbus has launched an extra-performing wing demonstrator project focused on accelerating and validating technologies that will improve and optimise wing aerodynamics and performance for any future aircraft. This scaled demonstrator will integrate and fly breakthrough wing technologies on a Cessna Citation VII business jet platform in representative flight conditions. The applications of the extra-performing wing would be compatible with any propulsion solution and aircraft configuration and would reduce CO₂ emissions, contributing greatly to Airbus' decarbonisation roadmap.

“Airbus' extra-performing wing demonstrator is another example of Airbus' novel technology-oriented solutions to decarbonise the aviation sector,” says Sabine Klauke, Airbus Chief Technical Officer. “Airbus is continuously investigating parallel and complementary solutions such as infrastructure, flight operations and aircraft structure. With this demonstrator, we will make significant strides in active control technology through research and applied testing of various technologies inspired by biomimicry.”

Similar to how an eagle soars, adapting the shape, span and surface of its wings and feathers, this demonstrator allows for increased flight efficiency. Various technology bricks will be investigated to enable the active control of the wing, including: gust sensors, pop-up spoilers or plates that are rapidly deflected perpendicular to airflow, multifunctional trailing edges that dynamically change wing surface in flight and a semi-aeroelastic hinge.

The demonstrator is hosted within Airbus UpNext, a wholly-owned Airbus subsidiary created to give future technologies a development fast-track by building demonstrators at speed and scale, in order to evaluate, mature and validate potential new products and services that encompass radical technological breakthroughs.

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Caption: CESSNA Citation VII with artist rendering of extra-performing wings.

Newsroom

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