GE Aviation

The Future Of Flight

How do you create the most advanced flight technologies while reducing carbon emissions? GE Aviation and Safran Aircraft Engines have done it for nearly 50 years through CFM International, a 50-50 joint venture that continues to revolutionize the aviation industry.

By extending their partnership to 2050 and launching the Revolutionary Innovation for Sustainable Engines (RISE)* program, GE and Safran will build on their decades of industry leadership to pioneer aviation’s next great era.

Sustainability

Since 1980, CFM International has reduced its engines’ overall fuel consumption and CO2 emissions by 40%, compared to the engines that were replaced. The RISE program will continue to prioritize a more sustainable jet propulsion future.

20%+ targeted gains in fuel efficiency: the RISE program’s central focus

15 years’ experience in biofuels strategies

Revolutionary Design

GE and Safran partnered on the GE36, the world’s first open-rotor aircraft engine, in 1984. In 2017, Safran and Avio Aero tested an open rotor as part of Europe’s Clean Sky initiative. The RISE program will continue to advance the engine’s revolutionary unducted design.

Advanced Materials

The RISE program builds on CFM engine advanced materials and aerodynamics for the next generation of aircraft engines.

Ceramic Matrix Composites

This mix of ceramic fibers and ceramic resin is one-third the weight of metal alloys and more heat resistant. Developed for CFM’s LEAP engine, they are now also used by Safran.

Additive Manufacturing

GE Aviation developed its first 3D-printed component, a fuel nozzle injector, in 2003. Additive manufacturing yields lighter, more durable parts than metal casting, and speeds up development and production.

Carbon Fiber Composites

GE originally developed the first carbon fiber composite fan blades for the GE36. These advanced blades have gone on to use on the GENx and LEAP engine. Their artistic design was displayed at the Museum of Modern Art in New York.

Leading The Way

1 billion engine flight hours logged with the CFM56, the world’s best-selling jet engine

20 round trips to Pluto — the equivalent of 200 billion miles flown collectively by the world’s CFM56-equipped jets

4,500 LEAP engines — the fastest-selling jet engine — delivered to date

>9,000 LEAP engine orders outstanding

*RISE is a trademark of CFM International, a 50-50 joint company between GE and Safran Aircraft Engines.