



NASA is with you when you fly!

X-59



F-15



@NASAaero



X-66



Saab 340B

Dash 7



X-59

NASA's Quesst mission will use the X-59 to overcome barriers to commercial supersonic flight and dramatically reduce air travel times for passengers. The X-59 will demonstrate the ability to fly supersonic, or faster than the speed of sound, while reducing the normally loud sonic boom to a quiet sonic thump. NASA plans to fly the X-59 over several communities and gather data on how people perceive the sound it produces. The agency will provide that information to U.S. and international regulators to potentially adjust rules that currently prohibit commercial supersonic flight over land.

F-15

NASA's F-15 aircraft help perform flight research. For example, F-15 aircraft will be equipped with systems that measure the pressure waves from the X-59 as it flies supersonic. F-15 aircraft flight crew also act as an extra set of eyes to monitor flight conditions, capture imagery, and are in constant contact with research pilots during flight demonstrations.

X-66

The X-66 will be used to help the U.S. achieve the goal of net-zero aviation greenhouse gas emissions by 2050, in support of the U.S. Aviation Climate Action Plan. Boeing will work with NASA to build, test, and fly the X-66, a full-scale demonstrator aircraft. The X-66 features a Transonic Truss-Braced Wing, which is an extra-long, thin wing stabilized by diagonal struts. When combined with additional green technologies, this wing configuration could reduce fuel consumption and emissions up to 30 percent relative to today's most efficient single-aisle airplane.

Saab 340B and De Havilland Dash 7

NASA is working to address the aviation community's goal of net-zero carbon emissions by 2050. This will help to greatly reduce the impact of aviation on climate change. As part of this effort, NASA is partnering with GE Aerospace and magniX to conduct ground and flight tests of electrified aircraft propulsion technologies to enable a new generation of environmentally friendly aircraft. GE Aerospace will test its hybrid powertrain on a modified Saab 340B airplane, while magniX will test its hybrid powertrain on a modified De Havilland Dash 7. NASA aims to help transition these technologies into commercial products and introduce them to the U.S. aviation fleet.

These aircraft are part of NASA's Integrated Aviation Systems Program, which conducts research on concepts and technologies that benefit the aviation community and flying public.