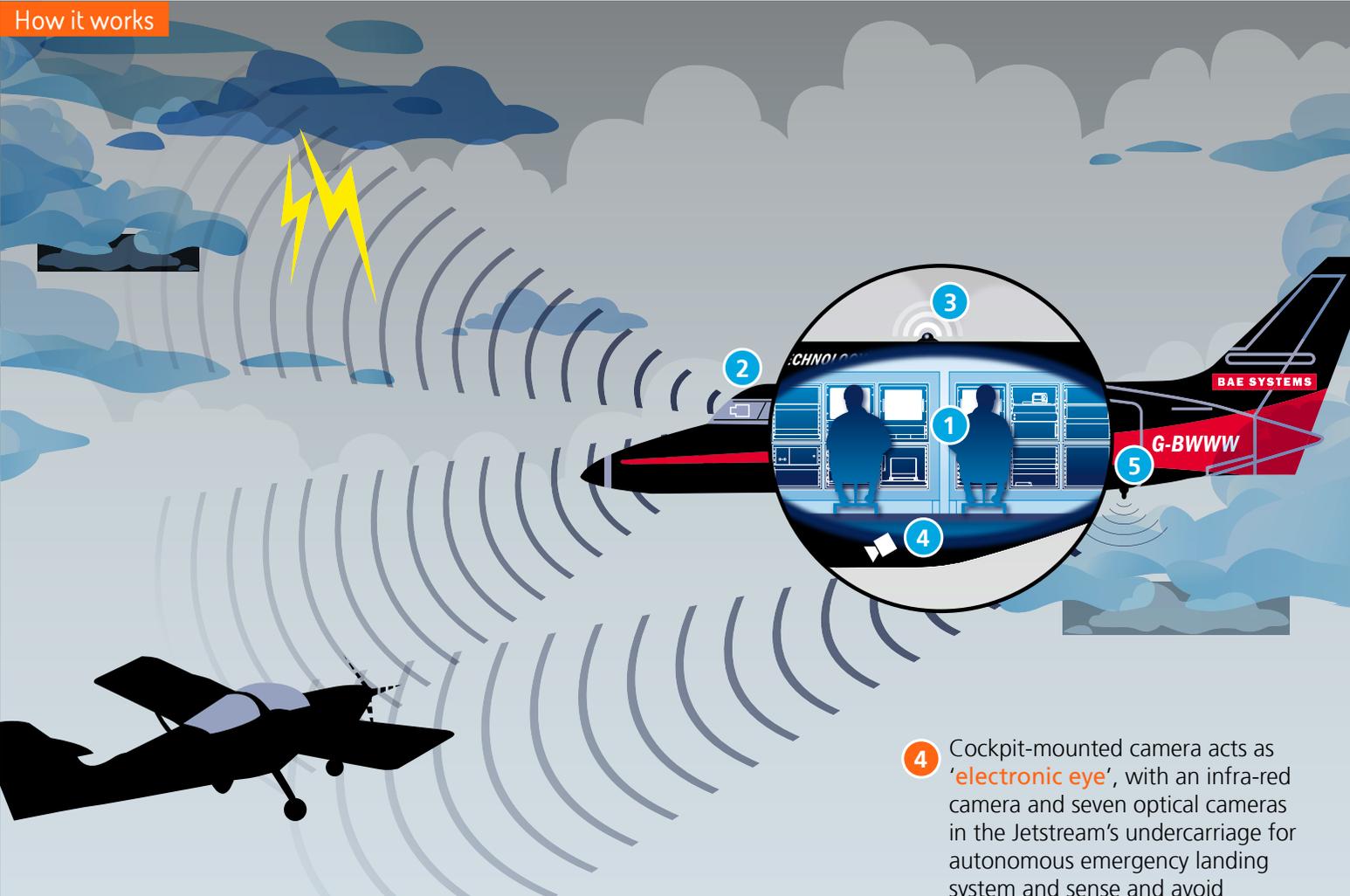


Jetstream 31 Flying Testbed

BAE Systems has converted one of its Jetstream 31 aircraft to act as a flying 'testbed'. The testbed is trialling a range of autonomous technologies that in time could be applied to commercial and military aircraft as well as proving the safe operation of autonomous aircraft in UK airspace. These technologies include sensing, weather avoidance, and satellite-based communication systems.

BAE SYSTEMS
INSPIRED WORK

How it works



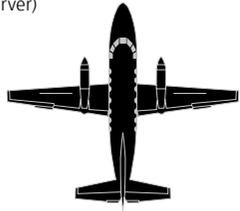
- 1 Central passenger cabin developed as a test lab with powerful computers. Manned by a **Flight Test Observer** and **Systems Operator** to test different scenarios.
- 2 Pilot and co-pilot use for take-off and landing only – **aircraft flies itself** once in controlled airspace.
- 3 Antennae for ground-based and **satellite-based communications**.

- 4 Cockpit-mounted camera acts as '**electronic eye**', with an infra-red camera and seven optical cameras in the Jetstream's undercarriage for autonomous emergency landing system and sense and avoid technology for other aircraft and adverse weather conditions.
- 5 **Aircraft Identification Antennae** (ADS-B=Automatic Dependent Surveillance – Broadcast).

Jetstream 31 (Flying Testbed)

A twin-turboprop airliner with pressurised fuselage – originally designed to carry 16 passengers.

AIR CREW:	2 plus 3 Test personnel
GROUND CREW:	2 (Unmanned Air Vehicle Commander + Flight Test Observer)
WINGSPAN:	52 feet
LENGTH:	47 feet 2 inches
HEIGHT:	17 feet 5 inches
MAX SPEED:	282 mph
CRUISE SPEED:	269 mph
SERVICE CEILING:	25,000 feet
RANGE:	1,380 miles



Latest Test Series

In 2016, BAE Systems will trial the Jetstream 'Flying Test Bed' through a new series of 17 self-funded test flights – each lasting 1.5 hours. The aircraft will host a team of two engineers on-board and two air traffic control experts on the ground who, together continually assess the performance of the system on the Test Bed.

New Communications System



- This latest series of tests will trial a new, more direct method of communication with the Jetstream 31
- A commercial phone will be routed via a cellular provider and secure VPN to the Jetstream
- Cutting down communication time between operator and aircraft by almost 50%