



# ULTRAFAN 30 DEMONSTRATOR

Redefining propulsion for the future of narrowbody aircraft.

Narrowbody aircraft production is forecast to double over the next 25 years and represents the single biggest growth opportunity for the UK aerospace industry over the next 50 years.

Our UltraFan® 30 demonstrator will not only drive continued improvements in fuel burn, efficiency and durability but will enable us to support the long-term growth of this market – creating tens of thousands of high value jobs nationally and stimulating growth in UK manufacturing capability, regional supply chains, research, development and engineering skills.

- We are committed to providing a ducted geared solution for the narrowbody segment in partnership.
- Targeting 20% fuel burn improvement relative to the current in-service engines.
- Compatible with 100% sustainable aviation fuels from day one.

Planned for ground testing in 2028, the UltraFan 30 demonstrator takes what we've learnt in creating world leading widebody and business aviation engines to the narrowbody market, using technology from proven and safe architectures.

## Technology and architecture – The UltraFan 30 demonstrator features:

- A new engine core architecture to deliver maximum fuel burn efficiency and reduce emissions.
- A CTi Fan System with carbon/titanium fan blades and a composite casing.
- Advanced manufacturing, materials and technologies such as Additive Layered Manufacturing (ALM) to save on waste and allow for more intricate designs and CMC materials to withstand higher temperatures.
- A geared design which will deliver efficient power for the high-thrust, high-bypass ratio engines of the future.

## Performance:

- Up to 20% more fuel efficient than engines in service today.

## Engineering fun facts:

- The UltraFan 30 demonstrator is equipped with a 90-inch fan sculpted with advanced aerodynamics for maximum performance.
- Efficiency is boosted by a pressure ratio of 50:1, a bypass ratio of 12:1 to 15:1 and a 20 MW Power Gearbox.

## Funding organisations:

- Clean Aviation, Aerospace Technology Institute, Innovate UK, LuFo, Brandenburg State.

## Images:

- Available in a dedicated UltraFan folder on the Rolls-Royce flickr.com account.

