

Published in Spring 2022, the ATI technology strategy for UK aerospace Destination Zero set out how the UK can take a lead in the transition to the ultra-efficient, zero-carbon and cross-cutting technologies required to reach Net Zero in aviation.

Assessing progress against the technology strategy, the ATI has identified areas key to achieving Net Zero 2050 and securing UK competitiveness which require investment in upcoming funding batches.

The current primary funding opportunities include high temperature fuel cell systems, hydrogen tanks, thermal management for hydrogen propulsion, passive dry wings, ultra-efficient landing gear systems and materials and processes across high aspect ratio wings and liquid hydrogen gas turbine propulsion. The cross-cutting technologies required to deliver these will also be considered as primary funding opportunities.

The full list on page 2, shows a total of 17 technology bricks across seven product areas. These primary funding opportunities will serve as an additional resource to enhance the ATI's decision making process when considering applications to the Programme. All applications remain subject to the competition assessment criteria and eligibility rules. An updated list will be made available after each batch of ATI Programme funding is awarded to ensure it reflects the latest technology areas identified for development.

Where a technology is not listed as a primary funding opportunity, this is for one or more of three reasons:

- Significant activity funded through the ATI Programme completed or ongoing.
- Limited activity eligible for ATI Programme funding anticipated in this area in upcoming batches.
- Limited technology development for aerospace applications anticipated in this area.

The ATI Programme remains an open competition and the ATI continues to encourage ideas and engagement from across the whole aerospace spectrum aligned to the ATI technology strategy.

The ATI Programme is extremely competitive thanks to the strength and ambition of our sector. Over the past nine years, more than £1.8bn has been invested through the ATI Programme in projects across the UK including ultra-efficient engines, fuel cell powertrains, advanced manufacturing and next generation wings.

The right investments today will unlock the potential the transition to ultra-efficient and zero-carbon technologies represents for UK aerospace.



Recent years have seen unprecedented demand for ATI funding thanks in part to the success of a Programme which has made possible the development of world-leading aircraft technologies here in the UK.

To secure UK competitiveness and deliver on our Net Zero commitments, the ATI has identified primary funding opportunities where investment through the ATI Programme can accelerate their development, capture market share and maintain or grow capability.

**Gary Elliott, CEO, ATI** 



## **Product**

## Primary funding opportunities in upcoming batches

Non-propulsive energy and control systems



Ultra-lightweight and SAF compatible fuel management & gauging technology



UE landing gear systems

Ultra-efficient (UE) high aspect ratio (HAR) wings (whole wing)



HAR enabling technologies



Materials and process development for NNS, AM and composites



Demonstration of high rate manufacture and assembly of composite HAR wing

Dry Wings for zero-carbon aircraft



Passive dry wing design and analysis methods



Passive dry wing wind tunnel and functional testing

Liquid hydrogen gas turbine propulsion



Hydrogen combustion sector rig test & full annular low NOx combustion



Engine control systems ground test



Materials and process development for cryogenic and hydrogen tolerant engine applications

Ancillary hydrogen systems



Materials testing for high temperature fuel cell systems capability



Thermal management for hydrogen propulsion systems



Materials and process development for AM, composites, cryogenic and high temperature applications



H2 ancillary fuel systems



Hydrogen tanks

Hydrogen fuel cell propulsion



High temperature fuel cell systems

All-electric propulsion



High power motors and drive systems for electric propulsion