

Press release: Lift off for electric planes – new funding for green revolution in UK civil aerospace

- UK to be at forefront of next revolution in electric and hybrid planes – benefiting passengers and the planet
- £343 million government and industry investment for research and development and productivity improvements to transform the future of civil aerospace and continue the UK's status as a pioneering aerospace nation
- the government launches negotiations with industry on a new Aerospace Sector Deal, as part of the modern [Industrial Strategy](#)

The UK's world-leading aerospace sector will be propelled into a new era of cleaner, greener flight through industry and government investment, the Business and Energy Secretary announced today at the 2018 Farnborough International Airshow.

From the total investment, £255 million – supported by the Aerospace Technology Institute (ATI) and UK Research & Innovation (UKRI) – will go towards 18 new research and technology projects, including the development of cleaner and greener hybrid aircraft. To support small and medium-sized companies, £68 million of the funding will be made available to increase research and development opportunities, with £20 million to drive improvements in long-term productivity across the sector.

The projects will not only help maintain the UK's existing strengths in aerospace but also position the UK as a world leader for some of the most technologically advanced aircraft that will transform the face of aviation including electric aircraft, hybrid-electric propulsion systems, and future materials for aircraft manufacturing.

A major beneficiary of the latest research and development funding is the revolutionary E-Fan X project. The project brings together Airbus, Rolls-Royce and Siemens to develop a flying electrical demonstrator which will form the foundation for future electrical aircraft and help the aerospace sector to manufacture cleaner, quieter aircraft and grow the industry sustainably. Rolls-Royce's ACCEL project will also lead a UK programme to accelerate the electrification of flight which will contribute to the UK's aim to cut emissions through its [Clean Growth Strategy](#).

Business and Energy Secretary Greg Clark said:

The UK has a rich heritage in civil aviation as the home of the jet engine and the wings factory of the world. Technology is driving revolutionary changes in aviation that have not been seen since the 1970s and today's investment is foundational to the future of

commercial aviation and ensuring the UK remains at the cutting-edge of the sector. This revolution in civil aerospace will bring significant benefits to UK industry, passengers and the environment.

Through our modern Industrial Strategy, we are working with industry to lead the world as we embark on this journey into the new age of air travel.

This funding will also support a number of projects on the next generation UltraFan® aero engine, led by Rolls-Royce, which will contribute to their biggest shift in engine architecture since the 1970s. It will transform flight, setting new benchmarks in fuel efficiency, CO2 reductions and significant cut backs in engine noise.

Aviation Minister Baroness Sugg said:

The development of quicker, quieter and cleaner aircraft will transform the UK's transport market and open up new and more sustainable ways for passengers to travel between our cities and regions and across the globe. Developing innovation, technology and skills is a core part of the government's Aviation Strategy and this funding will help us to ensure that the UK aviation sector continues to be a world leader in this area.

Backing our world-leading aerospace sector, the Business and Energy Secretary also announced the start of formal negotiations for an Industrial Strategy sector deal that will further increase business investment in the UK, with discussions expected to conclude before the end of the year. The deal will:

- explore investment opportunities around electrification and high-value design
- raise productivity levels in the supply chain
- and boost skill levels in the sector

The latest wave of projects to win the competitive funding underlines the significant importance of the £3.9 billion joint research and development funding commitment in the sector as part of the Industrial Strategy.

The government also welcomed the completion of Bombardier and Airbus' Joint Venture; a partnership that will support the development and manufacture of structures for the A220 jet at the Bombardier facility in Belfast.

Notes to editors

Further information about BEIS' Farnborough commitments.

Research and development investment

Projects supported by joint government and industry investment include:

Airbus, Rolls-Royce, Siemens

- E-FAN X (ELECTRIFICATION), £58 million project

A partnership between Airbus, Rolls-Royce and Siemens to develop a flight demonstrator for hybrid-electric propulsion for commercial aircraft. Hybrid-electric technology will deliver improved environmental performance that is cleaner, quieter and introduce re-evaluations of the entire design of aircraft.

Rolls-Royce

- series of projects on ULTRAFAN®, and ACCEL, worth a total of £70 million

4 projects on engine technologies for UltraFan involving multiple partners including universities and smaller companies. A new generation of aircraft engine that aims to transform flight, setting new benchmarks in efficiency, environmental performance and precision engineering. ACCEL is intended to accelerate the adoption of electrical technology in aviation through the design build and flight test of a high performance electric powertrain.

Bombardier

- Competitive Composite Manufacturing Process (CoCoMaP), FANTASTIC (Nacelle) and OptiComp (Wing project), £32 million project

3 research projects exploring more efficient manufacturing processes, new technology for engine covers (nacelles) and the application of composite material to large aerospace structures, such as wings and fuselage. All 3 projects will be led by Bombardier Belfast (Shorts).

GKN

- CO-MET (COmposite and METallic) £9.7 million

This project will help GKN develop new aerostructure components for aircraft upgrade opportunities and new programmes.

Airbus

- Future Landing Gear, £16 million project

This project aims to reduce cash operating costs by 2% through increased efficiency and reduced turn-around times.

National Composite Centre Operation Limited

- £44 million for 3 projects

3 projects with National Composite Centre, part of High Value Manufacturing Catapult, to develop new, more efficient ways of producing large composite aerostructures. The research will explore the use of new composite materials as well as the manufacturing process.

University/Research Organisations projects – total £26 million for 3 projects

- University of Oxford

Infrastructure for the University of Oxford Osney Thermo-fluids Laboratory (OSNEY Upgrade). The Oxford Thermofluids Institute is part of Oxford University's strategic investment in the UK's science base. The laboratory is a global centre of excellence for turbomachinery research which has made significant contributions to the technology of jet engines over the last 3 decades. This grant will be used to achieve a step change in capability to measure and research the cooling performance and hot stage technologies essential for the operation of high pressure (HP) turbine stages of Large Civil Engines.

- University of Sheffield

PERFORM (Disruptive Textile Technology for Aerospace Applications): Perform is a project with the University of Sheffield's Advanced Manufacturing Research Centre (AMRC), part of the High Value Manufacturing Catapult. The research will develop new composite material and efficient manufacturing processes.

- The Welding Institute Limited

OAAM (Open Architecture Additive Manufacturing): the Welding Institute, an engineering research and technology organisation, is taking the lead in the Open Architecture Additive Manufacturing (OAAM) project to demonstrate the ability to manufacture large metallic components via Additive Manufacturing (AM) (also known as 3D printing) for the benefit of UK Aerospace.

Government and industry support for SMEs

£68 million joint industry and government investment for new research and development opportunities targeted to support small and medium-sized businesses. An open competition supported by UKRI will back SMEs to carry out new research on high risk, high reward solutions that will help UK companies grow their capability for the long-term.

There will also be further rounds of the successful National Aerospace Technology Exploitation Programme to help SMEs develop new technologies. SMEs will also be able to increase their productivity through a new improvement programme that will increase their ability to win new work with new and

existing customers. A new partnership between the UK and Sweden will also see the 2 countries collaborate on technological research.

Defence Enterprise Export Partnership

The Defence Enterprise Export Partnership (DEEP) is a joint government, industry and academic initiative led by the Defence Growth Partnership (DGP) to ensure that the UK generates the skilled personnel able to lead successful international defence export campaigns. The initiative will support the Industrial Strategy by driving export-led growth and ensuring that the UK retains vital skills.

Caroline relishing new SRUC director role

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Stemming the tide

'Green engineering' techniques that help to stabilise river banks and halt the erosion of fields are to be showcased at a free event organised by the Scottish Government's Farm Advisory Service (FAS).

Keep Scotland Beautiful launches first wave of bathing water campaign

 16 July 2018

My Beach, Your Beach, Keep Scotland Beautiful's latest campaign to improve bathing waters at three well known beaches, was launched today.

The campaign, funded by Scottish Government, will aim to make a difference by tackling littering, dog fouling and feeding gulls by those visiting the beach.

Launching on one of busiest beach days of the year, the start of the Glasgow Fair, we will be focusing on three beaches in particular:

- South Beach, Ayr
- Portobello Beach, Edinburgh
- Fisherrow Sands, Musselburgh

All three of the beaches selected for this campaign trial have faced challenges in improving the quality of their seawater as measured by the Scottish Environment Protection Agency (SEPA), whose research confirms the strong link between behaviour on the land and the cleanliness of the local seawater.

Environment Secretary Roseanna Cunningham said:

"This campaign is one of a number of measures to improve three of Scotland's best loved beaches and bathing waters, which are enjoyed by thousands of people on a daily basis. Sadly, some of those users leave more than just footprints behind, with dog fouling and littering, which attracts gulls, impacting on water quality.

"Keeping our beaches and bathing waters clean is a priority for the Scottish Government, which is why we're helping to fund Keep Scotland Beautiful's campaign, and working closely with stakeholders to provide long term solutions to the problem.

"I know the people of Scotland will be keen to support the campaign, and I would encourage them to do so by carrying out some simple actions to help us all continue to enjoy Scotland's amazing beaches and bathing waters."

A campaign team were on Ayr South Beach today to meet and inform local beach users of the importance of responsibly collecting and removing their rubbish from the beach at the end of their visit, not letting dogs foul the beach, and discouraging the feeding of gulls which then leads to further negative impact on the local environment.

Members of the public were urged to get involved in a #2MinuteCleanUp and share their successes on social media, and dog owners were encouraged to

enter the 'doggy portrait' competition which could see their pets feature as the face of a dog fouling campaign – reminding dog owners to 'bag it and bin it'.

Nicola Turner, Community Projects Officer at Keep Scotland Beautiful, commented:

"We can all play a part in cleaning up our nation's bathing waters, improving the experience at the seaside for locals and visitors alike. Whilst visitor behaviour is only part of the solution, by taking our litter home, bagging and binning dog poo, and not feeding the gulls, we can all be part of the solution and get cleaner water for us all to enjoy.

"The launch of our 'My Beach, Your Beach' campaign emphasises our shared responsibility, and we look forward to meeting lots more local beach users as the campaign period unfolds."

The pilot project covering the three beaches will trial a number of interventions, including:

- Business packs for local business including stickers, posters and information on how they can get involved,
- Colourful bin wraps with key campaign messaging,
- Signage around the beachfront raising awareness of the campaign,
- A series of community engagement events involving dogs, litter and gulls, communicating how these can seriously impact on water quality.

Councillor Ian Cochrane, South Ayrshire Council's Portfolio Holder for Sustainability and the Environment, added:

"We're extremely proud of our beaches in South Ayrshire and work incredibly hard throughout the year to keep them looking their best and to ensure – as far as we can – that our bathing waters meet national standards.

"Where standards aren't quite what we want them to be, we work closely with SEPA and other partners to address pollution issues – and visitor behaviour is one way to do that. By being responsible and picking up after ourselves and our dogs and making sure that we feed our bins, not the gulls, we can help reduce the amount of dog and bird poo and litter that makes its way into our waters.

"That's even easier this year thanks to hundreds of new bins that are being put in place at our beaches in South Ayrshire. And, with tens of thousands of people flocking to our beaches during the summer, people power really can make a difference and allow us all to enjoy our stunning coastlines and My Beach, Your Beach."

The campaign is also designed to complement the range of work currently undertaken by SEPA on bathing water quality.

Terry A'Hearn, Chief Executive of the Scottish Environment Protection Agency (SEPA), said:

“Every day SEPA works to protect and enhance Scotland’s stunning environment, and we are committed to ensuring all of Scotland’s designated bathing waters meet water quality standards.

“By targeting behaviour on land that can affect bathing water quality Keep Scotland Beautiful’s ‘My Beach, Your Beach’ campaign will complement SEPA’s work. Recently Scotland has seen the best rates of compliance since the Bathing Water Directive began and by working in partnership we can further improve the quality of Scotland’s bathing waters including at Ayr South Beach, Portobello and Fisherrow Sands.

“Working with partners, we’re continuing our focus on bathing waters rated as ‘poor’, with tailored improvement plans prepared by SEPA. These projects will result in major improvements to bathing water quality in the future and should see improvements over the coming season.”

To watch as the campaign unfolds this summer, check out the [My Beach, Your Beach](#) pages and if you see any of the beach interventions tag us with #MyBeachYourBeach.