

# **£84 million boost for technology to power a green aviation revolution**

- Green technology which could one day be used for taxi-like aircraft is set to revolutionise the aviation industry, with potential for zero-emissions air travel by 2023
- £84.6 million invested by government and industry in 3 ambitious aerospace projects based in Bedford, Bristol, and Cranfield
- projects will help the industry to build back better and greener, and have the potential to unlock up to 4,750 jobs across the UK

Nearly 5,000 jobs could be secured in making the UK's aviation sector greener, thanks to a multi-million-pound boost for 3 pioneering research and development projects announced today (Thursday 28 January) by Business Minister Paul Scully.

The winning projects represent a total investment of £84.6 million – half from the government, delivered through the ATI Programme, and matched by industry.

Each of the 3 projects will use British innovation and expertise in green technology to power zero-emissions flights, using alternative energy sources of hydrogen or electricity to reduce the industry's reliance on polluting fossil fuels.

From Bristol to Coventry and Cranfield to Orkney, these projects could help secure up to 4,750 design, engineering and manufacturing jobs.

Not only could this technology enable passengers to travel abroad in a greener fashion, in future it could enable the skies to be used for travelling much shorter journeys, similar to a local taxi service, reducing congestion on road networks, and allowing passengers to travel more quickly and locally.

Innovative aerospace technology is rapidly developing, meaning that there is the potential for zero-emissions flights to be a reality as early as the end of 2023.

Minister for Business, Paul Scully, said:

These trailblazing projects are broadening the horizons of future air travel, towards a greener future where we may be able to hail taxis from the sky rather than on our streets.

This multi-million-pound boost will help to secure up to 4,750 jobs in these projects spanning the UK, and could pave the way to technological advances that will allow the industry to build back better and greener following the COVID-19 pandemic – and help

tackle climate change.

The following three projects are receiving funding:

- GKN Aerospace-led project H2GEAR will receive a £27.2 million government grant to develop an innovative liquid hydrogen propulsion system (a component that propels the aircraft forward) for regional air travel, which could be scaled up for larger aircraft and longer journeys
- ZeroAvia's HyFlyer II will receive a £12.3 million government grant to scale up its zero-emissions engines for demonstration on a 19-seater aircraft, showcasing its significant technological advances, meaning that customers can expect to fly on zero-emissions aircraft as early as the end of 2023
- InCEPTion, led by Blue Bear Systems Research, is receiving a £2.8 million government grant to develop a fully-electrified zero-emissions propulsion system for aircraft, that is powerful, quiet and efficient and could be used for smaller aircraft travelling short distances – even within the same city

The government is committed to helping advance the UK's future transport system through its extensive [R&D Roadmap](#) and to increase R&D public spending to £22 billion per year by 2024 / 2025. This investment comes ahead of our consultation on the Aviation Decarbonisation Strategy this year, set out as part of the Prime Minister's [Ten Point Plan for a green industrial revolution](#), with jet zero and low carbon aviation as a key pillar to building back greener.

The announcement of today's grant winners is the latest in government support for the aerospace sector. It forms part of a wider £3.9 billion government-industry investment in aerospace research and development projects from 2013 to 2026 through the Aerospace Growth Partnership and delivered through the ATI Programme.

During the pandemic, aerospace companies have been able to benefit from the government's extensive business support measures including furlough, CBILs, and Bounce Back loans. The aerospace sector and its aviation customers are being supported with almost £11 billion made available through loan guarantees, support for exporters, the Bank of England's COVID Corporate Financing Facility and grants for research and development.

## Notes to editors

1. The ATI Programme's grant winners have been chosen by the Department for Business, Energy and Industrial Strategy, Innovate UK, and the Aerospace Technology Institute. The total investment in the 3 projects will be £84.6 million, with £42.3 million government funding matched by industry.

2. The government also awards aerospace funding through the Future Flight Challenge, which in total will award £125 million of government grants, matched by industry, to companies investing in future aviation systems and vehicle technologies, enabling new classes of electric or autonomous air

vehicles.

3. Aviation has a crucial role to play in achieving the government's net zero commitment. To this end, in addition to funding, the government has established the Jet Zero Council, a partnership between industry and government to bring together ministers and industry stakeholders to drive the ambitious delivery of new technologies and innovative ways to cut aviation emissions.

4. This year, the UK will host the UN climate change conference, COP26, in Glasgow with partners, Italy. This will provide an opportunity for the world to come together and commit to urgent action. As hosts of COP26, the UK will lead by example during this unprecedented time. Guided by science, the UK will invest in a green recovery which creates sustainable jobs and addresses the urgent and linked challenges of public health, climate change, and biodiversity loss. The UK is committed to working with all countries and joining forces with civil society, companies and people on the frontline of climate change to inspire action ahead of COP26.

## **Details of today's winning projects**

### **GKN Aerospace-led H2GEAR (Hybrid Hydrogen & Electric Architecture), Bristol**

£54.4 million over 5 years – £27.2 million government grant, matched by industry.

H2GEAR will be delivered in collaboration with partners from GKN Aerospace's Global Technology Centre in Filton, Bristol. The project aims to develop a liquid hydrogen propulsion system for regional aircraft that could be scaled up to larger aircraft. This could create a new generation of clean air travel, eliminating harmful CO<sub>2</sub> emissions and leaving water as the only by-product of flight. If successful, the project could help secure up to 3120 high value engineering and manufacturing jobs by 2032 / 2033 in Bristol, Coventry and Loughborough.

### **ZeroAvia-led HyFlyer II, Cranfield, Bedfordshire**

£24.6 million over 2 years – £12.3 million government grant, matched by industry.

In 2019, the project was awarded an ATI Programme grant to produce a zero-carbon engine which was recently demonstrated on a successful test flight for a 6-seater aircraft – the largest hydrogen-electric aircraft worldwide. This latest round of funding will enable the consortium to scale up its hydrogen technology for use on a 19-seater aircraft, another stepping stone on the path towards the government's Jet Zero ambitions. The company will showcase the technology in various test flights, including a world-first long-distance zero-emissions demonstration flight of this size and power level in January 2023. It will also enable ZeroAvia to enter the formal certification process at the end of the project, so that customers can expect to fly on zero

emissions aircraft as early as the end of 2023. If successful, the UK-based consortium, including Aeristech and the European Marine Energy Centre, could help to secure 300 design jobs and 400 manufacturing jobs in Cranfield, Warwick and Orkney.

## **Blue Bear Systems Research-led InCEPTION (Integrated Flight Control, Energy Storage and Propulsion Technologies for Electric Aircraft), Bedford**

£5.6 million over 2 years – £2.8 million government grant, matched with industry.

The consortium aims to develop a zero-emissions fully-electrified propulsion system for aircraft, which if scaled up, would be capable of powering a range of aircraft including unmanned drones and passenger aircraft. This will enable a broad range of new mobility services across the UK, from large cargo delivery to regional commuting. If successful, the project could help secure up to 30 new engineer jobs during the early certification and pre-production phases in Bedfordshire and Derby, and a further 600-900 manufacturing jobs during production in the UK.

## **Further quotes**

Gary Elliott, Chief Executive of the Aerospace Technology Institute, said:

Today's announcement shows how the Aerospace Technology Institute (ATI) through its long-term funding is stimulating research in technologies to deliver future zero-emission flight. The ATI Programme is focused on innovation and sustainability: keeping the UK aerospace sector at the forefront of next-generation technology.

And we are delivering vital support for companies both large and small – securing thousands of jobs across the country and generating strong economic return to the UK.

Simon Edmonds, Innovate UK's Deputy Executive Chair, said:

The need to change how we fly has never been more pressing, moving towards zero-carbon powered aircraft is one way we can cut greenhouse gas emissions. By investing in innovative UK companies and technologies we can ensure momentum is maintained and the country is well positioned in the markets that will emerge.

Each of these projects are extremely exciting and we look forward to working with the partners to ensure their success.

Russ Dunn, Chief Technology Officer for GKN Aerospace, said:

Hydrogen-powered aircraft offer a clear route to keep the world connected, with dramatically cleaner skies. The UK is at the forefront of this technology, and the H2GEAR project is an example of industry, academia and government collaboration at its best.

Working with our partners, and made possible by UK government investment, GKN Aerospace will develop and industrialise the breakthrough technology that will enable aircraft to fly with zero CO2 emissions from the mid-2020s. This will not only create thousands of jobs, but it will keep the UK at the forefront of the next generation of cleaner air travel for decades to come.

Val Miftakhov, Founder and Chief Executive Officer of ZeroAvia, said:

The government's backing for our 19-seat hydrogen-electric powertrain development programme will deliver a market-ready hydrogen powered solution for 2023 that makes passenger-ready zero carbon aviation a reality.

The UK is at the forefront of sustainable flight and we are proud that the government has put its faith in us again to deliver another milestone towards the Jet Zero ambition.

Dr. Yoge Patel, Chief Executive Officer of Blue Bear Systems Research, said:

Inception is an exciting, fast paced project that builds upon remarkable UK innovation and specialist engineering within our consortium. We are combining the best from aerospace and automotive sectors to create a next generation product using 'more digital' systems engineering practices. I look forward to engagement with aircraft manufacturers for our next steps.

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## **Education attendance restrictions to remain in place**

The Prime Minister has confirmed today that schools and colleges will not return to full face-to-face education after the February half-term and that the current attendance restrictions will remain in place until 8 March at the earliest.

Children of critical workers and vulnerable children and young people will still be able to attend schools and colleges, including special schools and

alternative provision. Early years settings also remain open. All other pupils will continue to receive high quality remote education at home.

The Prime Minister made clear that while schools and colleges remain safe, keeping them partially closed will continue to help minimise the spread of the virus in communities and protect public health and save lives.

It is hoped that if the target of vaccinating everyone in the top four prioritisation cohorts by 15 February is met, then those groups will have developed immunity three weeks later, by 8 March. The government will therefore look at fully re-opening schools from this date.

He also committed to providing a programme of catch up into the next financial year, involving a further £300m of new money to early years, schools and colleges for tutoring, as well as working in collaboration with the education sector to develop specific initiatives for summer schools and a Covid premium to support catch up.

In recognition that extended school and college attendance restrictions will have a huge impact on children's learning, the government will work with parents, teachers and schools to develop a long-term plan to make sure pupils have the chance to make up their learning over the course of this parliament.

Education Secretary Gavin Williamson said:

The pandemic has had a truly terrible impact on the lives of so many people and while covid rates are falling, it remains of the utmost importance to minimise the spread of the virus in our communities and take action to respond quickly to the new variant.

It is this country's priority to get all children and young people back into face-to-face education and apprenticeship training, but it is crucial we do this at the right time and I want to assure parents, teachers, children and young people that schools, colleges and universities will be the first to fully return as soon as the public health picture allows it.

I know that this virus will have had a significant impact on children and young people's learning and that is why we are providing an additional £300m for tutoring programmes and developing a longer term plan to help all pupils catch up.

We will continue to engage with schools, colleges, universities and the wider sector on the pathway to full returns.

Last year the government announced a £1 billion catch-up programme, including a 'Catch-up Premium' of £650m to help address lost teaching time and support pupils' social and emotional needs; and a £350m National Tutoring Programme that will provide additional, targeted tuition support for disadvantaged pupils who need the most help to catch-up. The announcements made by the Prime Minister today are additional to this existing investment.

To support children and young people to learn at home, the government is providing extensive support to help teachers and pupils access quality remote learning, delivering 1.3 million laptops and tablets for those children and young people who need them most, with over more than 875,000 of these issued already, alongside access to free mobile data for disadvantaged families.

Education attendance restrictions are to be reviewed again in mid- February and the government has committed to publishing a plan for leaving lockdown by the end of February.

In universities, currently only those on critical courses such as medical, clinical and healthcare subjects should be receiving face-to-face teaching and all remaining students should continue their studies remotely until 8 March at the earliest. Students and staff on campus should take part in twice weekly testing on offer to help limit transmission and identify asymptomatic cases.

Further education providers will similarly be able to provide some on site teaching to a small number of critical worker students and apprentices who have upcoming assessments.

The rapid testing programme for secondary schools and colleges will continue for those on site. All secondary schools and colleges will be expected to test their students as they return to school/college – two lateral flow tests, three to five days apart – to help identify and isolate asymptomatic students before they circulate in the school/college community. Staff in primary and secondary schools, and in all colleges, now have access to two tests per week.

The government will also continue to provide support for pupils eligible for Free School Meals through vouchers or lunch parcels to those learning at home during term time next half term, and support during the half term holiday for vulnerable families through the Covid Winter Grant Scheme.

Attendance in early years provision should continue to remain available throughout and should continue to allow all children to attend full time or their usual timetable hours. This includes early years registered nurseries and childminders, maintained nursery schools, as well as nursery classes in schools and other pre-reception provision on school sites.

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## **Prime Minister's statement on coronavirus (COVID-19): 27 January 2021**

When we look at the toll of this pandemic

it must be measured

not only in the tragic loss of life that we have endured with over 100,000 deaths

and once again I offer my condolences to the families and friends of everybody who has lost loved ones –

but I'm afraid we must also remember not just the damage to the economy, but the lost weeks and months of education

and the real risk of damage to the prospects of our young people.

And so I share very much the frustration of pupils and teachers who today want nothing more than to get back to the classroom.

And I understand the stress and the anxieties of parents coping heroically with the pressures of homeschooling.

And I know that everybody across the country wants us to get schools open as fast as possible

And I can assure you that is the ambition of this Government.

But I also know, we all know, that with 37,000 people in hospital suffering from covid

and the infection rates still forbiddingly high

you, we all, must be cautious and we all want only to open schools when we can be sure that this will not cause another huge surge in the disease.

Because the problem is not that schools are unsafe

teachers and headteachers have worked heroically to make sure that they are safe, that they are covid secure

The problem is that by definition, schools bring many households together

And that contributes to the spread of the virus within the community,

and drives up the R.

And so it follows that if we are to get schools open – and keep them open –

which is what we all want

then we need to be clear about certain things.

We need to be sure the vaccine roll-out is continuing to be successful as it is

and most important, we need to see the impact of our vaccines on those graphs of mortality, we need to see that they really are saving lives and preventing

people from becoming seriously ill.

Now we are confident that will happen and vaccines will have that effect but to be responsible we must see the proof.

And our current estimates say that the proof will only become visible in the middle of February.

And since we need to give schools two weeks' notice to re-open

it is sensible now to serve notice that we will not be able to re-open schools immediately after half-term on 22nd February.

But if we continue to make the progress that we want to see, and that we believe we can see,

Then we hope to begin opening schools on Monday 8th March.

And to help parents and teachers with this extended period of remote learning

We will extend the arrangements for providing free school meals for those eligible children not in school

including food parcels and the national voucher scheme –

until those pupils have returned to the classroom.

And as we did this financial year, we will provide a catch-up programme over the next financial year,

with a further £300 million of new money to schools for tutoring,

and we will work with the education sector to develop, wherever appropriate, specific initiatives for summer schools

as well as a Covid Premium for catch-up and to support pupils to catch up

We will work with parents, teachers and schools to develop a long-term plan

to make sure all pupils have the chance to make up their learning over the course of this Parliament, so we tackle that issue of differential learning and kids who may have fallen behind through no fault of their own

And so with every jab that goes in we are becoming more confident

that we will reach our target of offering a first dose to everyone in the top four priority groups by the middle of February.

And at that moment we will be able to review our progress,

judge the state of the pandemic, and the effectiveness of the vaccine,

and then in the week beginning 22nd February we will set out our plan not

just for re-opening our schools

but gradually to re-open our economy and our society and to get our lives back to as close to normal as possible.

Now this will be a timetable that is inevitably going to be subject to adjustment

But I believe it will provide clarity and certainty about the way ahead, a roadmap that we can take together and use as a country to defeat the virus and begin steadily to reclaim our lives.

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## **Readout – Foreign Secretary call with US Secretary of State Antony Blinken**

News story

Foreign Secretary Dominic Raab has spoken with US Secretary of State Antony Blinken



A spokesperson from the Foreign, Commonwealth and Development Office said:

In their first phone call, the Foreign Secretary congratulated Secretary Blinken on his confirmation to the role. They discussed the opportunities to work together on a shared agenda, to reinforce democratic values across the world and to strengthen the two countries' global alliance. They spoke about the UK's presidencies of the G7 and COP26, the need to tackle Iranian destabilising behaviour and cooperation to hold China to its international commitments.

The Foreign Secretary welcomed President Biden's commitment to tackling climate change, including by re-joining the Paris Agreement, as well as the US re-engaging with the World Health

Organization.

They agreed to speak again soon and continue the ongoing conversation.

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## **GCA Webinar – 4 February 2021**

On 4 February 2021, Mark White, the Groceries Code Adjudicator (GCA) delivered his first webinar talking about:

- The role of the Adjudicator
- His first impressions and market observations
- His outlook for the role, work to date and priorities
- Working with suppliers and trade associations
- Introduction of the ['Tell the GCA'](#) reporting platform

You can watch a recording of the [GCA Webinar](#) on YouTube.