

News story: Billion-pound backing for British innovation

- £780m of extra funding for high-tech hubs
- This builds on £180m announced last month for North East
- Backing for British expertise at 40-year high
- Latest GDP figures confirm economy continues to grow

Britain's world-leading researchers and entrepreneurs will benefit from an additional £780 million to create the technologies of tomorrow, the Chancellor announced today (10 August 2018).

Philip Hammond will expand successful 'catapult centres' which are fuelling innovation across the country as part of the UK's ambitious, modern Industrial Strategy. This new funding backs Britain's brightest talent – supporting work in high-tech labs, cutting-edge factories and advanced training centres.

So far this has helped create hundreds of new products, services and inventions, including a portable pollution sensor that parents can attach to a child's buggy, cellular therapies to fight cancer and improve recovery of stroke victims, LED treatment for blindness, and more-efficient wings for aeroplanes.

The Chancellor made the announcement during a visit to the West Midlands on the day GDP figures showed the UK economy has grown by 0.4%.

The Chancellor of the Exchequer, Philip Hammond, said:

We are working hard to build a stronger, fairer economy – dealing with the deficit, helping people into work, and cutting taxes for individuals and businesses. Unemployment is at its lowest since the 1970s, our national debt is starting to fall, and the economy has grown every year since 2010.

It is by backing innovative British companies to grow and create jobs that we will continue this progress and build an economy fit for the future. Today's £780 million investment will support innovators across the country to create the technologies of the future, and the better, highly-paid jobs we urgently need.

This builds on £180 million announced by the Prime Minister for centres in the North East last month, taking the total of additional funding to almost £1 billion.

Mr Hammond met with apprentices and workers, who specialise in automation and machining, at the Manufacturing Technology Centre in Coventry. This high-tech facility has benefited from £122 million of government funding, and is

currently a world-leader in 3D printing.

The UK has a reputation for innovation and is building on this strength with the largest investment in research and development in 40 years. This is part of our balanced approach, getting debt falling while investing to create more opportunities for the high-skilled, well-paid jobs of the future.

The catapult network supports sectors and technologies that are going to be in high demand in the years ahead. It brings together the best of UK business, science and engineering to work side by side in research and development to 'catapult' products from ideas to market. It helps remove barriers to growth, which often can include access to finance, inadequate facilities or skills shortages.

Business Secretary Greg Clark added:

We are a nation of innovators, creators and entrepreneurs. Through our modern Industrial Strategy, backed by the largest investment in R&D in 40 years, we are boosting growth, creating new highly skilled jobs and helping change people's lives for the better.

This government wants to make the UK the most innovative nation in the world and the investment in our world leading catapult network will play a key role in building on UK strengths, bringing new ideas and products to market and helping drive local economies across the UK.

Dr Ian Campbell, Interim Executive Chair of Innovate UK, said:

Today's significant announcement means our world-class network of catapults can build on their success and continue helping thousands of businesses across the UK to undertake innovative R&D. This long-term investment will mean the catapults can help deliver the Grand Challenges of the Industrial Strategy in their sectors and help the UK achieve its ambition to raise investment in R&D to 2.4% of GDP by 2027.

In their first five years the catapults have supported around 3,000 small businesses to develop and exploit new technologies. They operate more than £850m world-class facilities and are also training hundreds of apprentices and doctoral students, such as at the High Value Manufacturing Catapult where in the last year 900 apprentices have gained invaluable practical experience with cutting-edge technologies used in modern manufacturing.

Further Information

Regional breakdown of funding:

Region	New funding	Project
West Midlands	£270.9m	For the Manufacturing Technology Centre in Coventry and Warwick Manufacturing Group (both part of the High Value Manufacturing Centre) and the Energy Systems Catapult, in Birmingham.
Yorkshire and the Humber	£126.7m	For the Advanced Manufacturing Research Centre, in Rotherham and Sheffield, and Nuclear Advanced Manufacturing Research Centre in Rotherham (both part of the High Value Manufacturing Centre).
North East	£180.3m	For the Offshore Renewable Energy Catapult in Blyth and the Centre for Process Innovation in Redcar.
Greater London	£70.6m	For the Cell & Gene Therapy Catapult in London (and Stevenage).
South West	£65.4m	For the National Composite Centre (part of the High Value Manufacturing Centre) in Bristol.
South East	£68.3m	For the Satellite Applications Catapult in Harwell.
Wales	£51.3m	For the Compound Semiconductor Catapult in Cardiff.
Scotland	£96m	For the Advanced Forming Research Centre in Strathclyde (part of the High Value Manufacturing Centre) and the Offshore Renewable Energy Catapult.

Today's announcement includes an allocation, confirmed by the Prime Minister last month, that the [Offshore Renewable Energy Catapult](#) in Blyth and the [Centre for Process Innovation](#) in Redcar, part of the [High Value Manufacturing Catapult](#), will benefit from additional £180 million to support hundreds more businesses to develop products and services which will be in high demand in the future.

The purpose of [catapult centres](#) is to remove barriers to innovation, help new entrants to increase competition and innovation in the economy by levelling the field for disruptors to challenge incumbents. They address these market failures by:

1. strengthening industry-academia links (maximising impact of our world-class science base)
2. maintaining open-access, cutting-edge facilities which individual companies could not afford to invest in, particularly SMEs (e.g. the Manufacturing Technology Centre houses multiple experimental facilities for prototyping different manufacturing techniques)
3. helping to build ecosystems conducive to innovation, by assisting regulators to be agile in response to technological advancement (e.g. the Cell and Gene Therapy Catapult worked with the medicines regulatory agency to cut the time it took firms to get gene therapies into clinical trials, from over a year to 60 days)

The catapults are private entities, which work in close partnership with Innovate UK, part of UK Research and Innovation and industry. Started in 2011, the catapult network is based on successful international models (e.g. the German Fraunhofer Institutes), which generate income from a balance of public grant, collaborative R&D awards and commercial contracting (in a 1:1:1

ratio). They operate in areas where the UK has significant economic opportunities and an international competitive advantage to drive growth.

Case studies

Hybrid Manufacturing Technology (High Value Manufacturing Catapult)

This new technology combines 3D printing with high speed computer controlled machining. It has the potential to save UK industry millions of pounds by re-manufacturing high value components that would otherwise have gone for scrap. Work is being taken forward to further commercialise this R&D, which has already made Britain a world leader in developing hybrid manufacturing technology.

Project Eyes on the Seas (Satellite Applications Catapult)

The Satellite Applications Catapult has been working to tackle the global challenge of illegal, unreported and unregulated fishing by combining satellite technology with big data. 'Project Eyes on the Seas' has already had major successes in combating this, improving the efficiency of enforcement and could in the future help to protect marine reserves and the overall wellbeing of the Earth's oceans.

New manufacture processes (High Value Manufacturing Catapult)

Local SME Technicut have partnered with Japanese-owned Nikken to develop the TiTan X-Treme – a new tooling system that dramatically speeds up the cutting of tough alloys such as titanium. The system is now sold and used worldwide, including in the new £100m Rolls-Royce Advanced Aerospace Disc Manufacturing facility, which was opened in June 2014, creating many valuable jobs.

Medical devices to cure common causes of blindness (High Value Manufacturing Catapult in Durham)

PolyPhotonix is on the verge of revolutionising treatment for degenerative sight-threatening conditions caused by age and diabetes. The current treatments are both costly and unpleasant and this innovation could potentially fill an urgent need for an effective, repeatable, value for money treatment.

Improving offshore wind turbines (Offshore Renewable Energy Catapult)

SMAR Azure has developed products used by 200 organisations in 29 countries, specialising in creating lighter, more efficient blades for offshore wind turbines that create more energy than existing offerings. It is now developing a new test rig at its world-leading National Renewables Energy Centre at Blyth, Northumberland, to validate and demonstrate a section of the blade prototype.