

Press release: Business Secretary calls for new tech revolution in agriculture

- new £90 million investment to bring together AI, robotics and earth observation to improve supply chain resilience in the agri-food sector
- UK agri-tech sector contributes £14.3 billion to UK economy, employing 500,000 people, with companies and researchers developing pioneering technologies from farming drones to 3D printing
- helping to fuel rural growth, create high-skilled jobs and open up new export opportunities as part of the [Industrial Strategy](#)

The Ordnance Survey's use of cutting edge satellite imagery and digital data collection to map over 200,000 miles of England's farmland and the CROPROTECT app which helps farmers protect crops from pests, weeds and diseases are among the technological innovations improving farming and food production that were hailed today (21 February 2018) in a speech by Business Secretary Greg Clark as he set out his ambition for a revolution in agri-farming, as part of the government's Industrial Strategy.

In a keynote speech to the National Farmers' Union conference, the Business Secretary highlighted how new technology is boosting farmers' earning power and making agri-businesses more productive and profitable than ever before.

To make it easier for farmers and agricultural supply-chain businesses to embrace technology and innovation, Mr Clark today announced £90 million of new funding to bring together the UK's world-class agri-food sector with expertise in robotics, AI and data science.

The funding, delivered as part of the new the [Industrial Strategy Challenge Fund](#), will make it easier for food and agri-business to embrace technology and innovation that will be critical to meeting the increasing food demands of a growing population, fuel rural growth and create high-skilled jobs.

Business Secretary Greg Clark said:

As someone who has known all my life that farming is foundational not just to our economy, but to our country. Providing the food and drink we live on and stewarding the countryside that is so much part of our national and local identity means there is no more essential industry.

The agricultural sector is the biggest industrial sector in the UK, Employing almost 4 million people and larger than the automotive and aerospace sectors combined.

For your unique role in stewardship and in feeding the nation like

big industry, you need to be profitable and we need to help make the conditions right for investment in the future.

With the technological revolution that is happening, the skills of the farming workforce need to keep pace. New technologies require new abilities and today's modern British farmer is a Swiss-Army-Knife of skills. An engineer, an environmentalist, a data scientist a biochemist, an energy producer, a tourism entrepreneur, and an investor too.

As part of the Industrial Strategy, we announced a Transforming Food Production Challenge and I'm delighted to announce the government will invest £90 million to make this challenge a reality.

This will include the creation of 'Translation Hubs' bringing together farmers and growers businesses, scientists and Centres for Agricultural Innovation to apply the latest research to farming practice.

Today's investment forms part of the government's Industrial Strategy which sets out a long term plan to boost the productivity and earning power of people throughout the UK. Through this strategy government is working with industry to help businesses create better, higher-paying jobs as well as setting a path for Britain to lead in the high-tech, highly-skilled industries of the future.

The announcement follows the government committing, through the Industrial Strategy, to raise public and private investment in UK research and development to 2.4% of GDP by 2027. This will be the UK's biggest ever increase in research and development investment and help to make Britain's economy the most innovative in the world.

Commitments

Government investment will help build on the strengths of the UK's booming agri-food sector, which employs around 4 million people across the UK, and support it by:

- bringing together businesses, farmers and academics to take forward priority research projects through new Challenge Platforms
- supporting Innovation Accelerators which will be responsible for exploring the commercial potential of new tech ideas at pace
- demonstrating innovative agri-tech projects and how they will work in practice
- launching a new bilateral research programme that will identify and accelerate shared international priorities and help build export opportunities for pioneering agricultural-technologies and innovations overseas

UK companies leading the way

UK farmers, agri-tech companies and research centres are already leading the way in this area, using technology like data, robotics and AI to help create new technologies and herald innovative new approaches, including:

- the Agricultural Engineering and Precision Innovation (Agri-EPI) Centre is bringing together leading organisations in the food supply chain to become a world-leading centre for excellence in engineering and precision agriculture
- the mobile app and website CROPROTECT, developed by Rothamsted Research, is helping farmers to protect their crops with farmers and agronomists using it to exchange best practice and tips on smart management of pest, weed and diseases
- Ordnance Survey have used their satellites to accurately map 232,342 miles of England's farmland hedges to create a new digital dataset and use planes with fixed state-of-the-art digital cameras to record thousands of individual photos that can map out farms and entire green landscapes

The funding forms 1 of 8 key areas that the government, together with business and academia, has identified through the Industrial Strategy Challenge Fund (ISCF), as being priority areas where research and innovation can help unlock markets and industries of the future in which the UK can become world-leading.

In the [Industrial Strategy white paper](#), the government announced £725 million of investment through the fund in cutting-edge technologies to create jobs and raise living standards.

Other areas set to receive government support through the ISCF in 2018 to 2019 includes early diagnosis and precision medicine to help detect life-changing diseases earlier, new products and services that support older people in the UK to remain active and independent, and new smart energy systems that deliver cleaner, cheaper energy for consumers and their communities.

UK Research and Innovation (UKRI) will shortly open a new expressions of interest call for more industry-led challenges that will form part of the next wave of the ISCF.

This third wave of programmes will invest in further ground-breaking ideas to tackle our major industrial and societal challenges, boost our productivity and delivery economic growth.

Professor Sir Mark Walport, Chief Executive of UKRI, which is responsible for the ISCF said:

Developing and effectively utilising the latest technologies and research methods will revolutionise the way we produce our food. Right across the agricultural sector, we can make the process more

efficient, more productive and more sustainable to deliver benefits for growers, producers and consumers. This is precisely why the ISCF was created.

We are now launching the process for businesses and researchers alike to come together to identify both pressing problems in food production and farming and opportunities that could benefit from the next wave of ISCF funding. I want to strongly encourage everyone in the sector to respond to our call for expressions of interest.

[Press release: Employment remains at near-record high](#)



Today's figures also show that groups across society are accessing new job opportunities:

- nearly 500,000 more people from a black and minority ethnic background (BAME) have started working since 2015
- the gender employment rate gap is at a near-record low, just 8.9%
- every region across the UK has seen employment increase since 2010
- youth unemployment has fallen by over 40% since 2010
- there are a record breaking number of workers aged 50 plus in work, reaching 10 million

Minister for Employment Alok Sharma said:

High employment rates are a reliable feature of today's economy – and this is an incredible achievement. It is equally important that across society everyone has the opportunity to get a good job and get on in life.

Today's figures show that this government is building a fairer economy that supports people from all backgrounds to get into work.

We are closing the BAME and gender employment gaps, and people across the country are accessing new opportunities.

Separate figures out today showed that [730,000 people are now on Universal Credit](#). Of these, 40% were in employment (290,000).

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[Press release: January 2018 Transaction Data](#)



In January:

- HM Land Registry completed more than 1,782,080 applications to change or query the Land Register
- the South East topped the table of regional applications with 403,526

The transaction data shows HM Land Registry completed 1,782,088 applications in January compared with 1,266,641 in December and 1,563,358 last January, of which:

- 462,352 were applications to update existing titles compared with 319,721 in December
- 825,613 were applications to obtain an official copy of a register compared with 551,427 in December
- 211,393 were official searches compared with 197,327 in December

- 26,002 were postal applications from non-account holders, compared with 26,377 in December

Applications by region and country

Region and country	November applications	December applications	January applications
South East	408,756	287,649	403,526
Greater London	339,086	250,636	339,286
North West	200,475	139,168	222,150
South West	173,351	124,681	173,058
West Midlands	152,816	107,079	150,292
Yorkshire and the Humber	135,373	98,017	139,207
East Midlands	125,846	90,239	122,812
Wales	82,646	58,854	80,315
North	81,197	56,648	77,912
East Anglia	74,499	53,549	73,345
Isles of Scilly	92	79	110
England and Wales (not assigned)	86	42	75
Total	1,774,223	1,266,641	1,782,088

Top 5 local authority areas

Top 5 local authority areas	November applications	Top 5 local authority areas	December applications	Top 5 local authority areas	January applications
Birmingham	27,715	Birmingham	19,714	Birmingham	27,561
City of Westminster	23,565	City of Westminster	17,977	City of Westminster	25,488
Leeds	20,137	Leeds	14,262	Leeds	20,256
Cornwall	18,823	Manchester	13,384	Manchester	19,350
Manchester	18,542	Cornwall	13,332	Cornwall	18,367

Top 5 customers

Top 5 customers	November applications	Top 5 customers	December applications	Top 5 customers	January applications
Enact	49,360	Enact	36,313	Enact	50,327
Optima Legal Services	25,532	Optima Legal Services	19,826	Nationwide Building Society	31,589
O'Neill Patient	24,260	O'Neill Patient	19,764	Optima Legal Services	27,284

Top 5 customers	November applications	Top 5 customers	December applications	Top 5 customers	January applications
TM Group (UK) Ltd	19,701	HBOS PLC	16,649	O'Neill Patient	26,073
HBOS PLC	19,315	TM Group (UK) Ltd	16,444	My Home Move Limited	19,103

[Access the full dataset on data.gov.uk.](#)

Notes to editors

1. Transaction Data is published on the 15th working day of each month. The February Transaction Data will be published at 11 am on Wednesday 21 March 2018 at [HM Land Registry Monthly Property Transaction Data](#).
2. The monthly Transaction Data showing how many applications for new titles, leases, splitting titles, updating existing titles, official copies of the register and searches were received, reflects the volume of applications lodged by customers using an HM Land Registry account number on their application form.
3. Completed applications in England and Wales, shown by region and by local authority include postal applications as well as those sent electronically.
4. Transaction Data excludes pending applications, bankruptcy applications, bulk applications and discharge applications (to remove a charge, for example, a mortgage, from the register).
5. Transactions for value are applications lodged involving a transfer of ownership for value. For an explanation of other terms used, see [abbreviations used in the transaction data](#).
6. Most searches carried out by a solicitor or conveyancer are to protect the purchase and/or mortgage. For example, a search will give the buyer priority for an application to HM Land Registry to register the purchase of the property. This can give an indication of market activity.
7. Reasonable skill and care are used in the provision of the data. We strive to ensure that the data is as accurate as possible but cannot guarantee that it is free from error. We cannot guarantee our data is fit for your intended purpose or use.
8. Transaction Data is available free of charge for use and re-use under the [Open Government Licence](#) (OGL). The licence allows public bodies to

make their data available for re-use.

9. If you use or publish the Transaction Data, you must add the following attribution statement:
Contains HM Land Registry data © Crown copyright and database right 2017. This data is licensed under the Open Government Licence v3.0.
10. HM Land Registry's mission is to guarantee and protect property rights in England and Wales.
11. HM Land Registry is a government department created in 1862. It operates as an executive agency and a trading fund and its running costs are covered by the fees paid by the users of its services. Its ambition is to become the world's leading land registry for speed, simplicity and an open approach to data.
12. HM Land Registry safeguards land and property ownership worth in excess of £4 trillion, including around £1 trillion of mortgages. The Land Register contains more than 25 million titles showing evidence of ownership for some 85% of the land mass of England and Wales.
13. For further information about HM Land Registry visit www.gov.uk/land-registry.
14. Follow us on: Twitter [@HMLandRegistry](https://twitter.com/HMLandRegistry), our [blog](#), [LinkedIn](#) and [Facebook](#).

Contact

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[News story: Loss of speed restrictions on the Cambrian line](#)

During the morning of Friday 20 October 2017, a train driver travelling on the Cambrian coast line in North Wales reported that long standing temporary speed restrictions were not indicated on their in-cab display. As signalling staff at the control centre in Machynlleth investigated this report, they became aware that this failure applied to several trains under their control. The temporary speed restrictions were required on the approach to level crossings so that people crossing the line had sufficient warning of an

approaching train.

The Cambrian lines were equipped in 2011 with a pilot installation of the European Rail Traffic Management System (ERTMS), a form of railway signalling. ERTMS removes the need for signals along the track by transmitting data directly to the train. This data is used to display movement authorities and other information such as temporary and permanent speed restrictions, on a screen in front of the driver.

Subsequent investigation found that the signalling system stopped transmitting temporary speed restriction data after a routine shutdown and restart at around 23:10 hrs the previous evening. The signallers had no indication of an abnormal condition and signalling control centre displays showed these restrictions as being applied correctly.

The RAIB has decided to undertake an independent investigation because to date, the signalling system supplier has not identified the cause of the failure. It is possible that finding the cause would have been assisted by downloading of suitable data from the signalling system before it was restarted during correction of the failure.

An additional procedure, since introduced at the control centre, is intended to identify and avoid any recurrence of the failure.

The RAIB investigation will consider:

- the geographic extent of the failure and the effect it had on the safety of railway operations
- why trains were permitted to operate without information about temporary speed restrictions
- practices for the gathering of data needed for investigation before restarting computer based signalling systems after a potentially unsafe failure

Our investigation is independent of any investigation by the railway industry or by the industry's regulator, the [Office of Rail and Road](#).

We will publish our findings, including any recommendations to improve safety, at the conclusion of our investigation. This report will be available on our website.

You can [subscribe](#) to automated emails notifying you when we publish our reports.

[News story: Using the power of data](#)

science to answer world-wide challenges

Dstl is working in partnership with Government Communications Headquarters (GCHQ) and the Alan Turing Institute – the national Institute for data science – on a number of defence challenges that exploit the power of data science.

As part of this work, Dstl took part in a Data Study Group, a regular series of events run by the Alan Turing Institute in which researchers work on real-world data science challenges over the space of a week. Dstl contributed a project for the Data Study Group to explore whether machine learning could be used to identify code vulnerabilities. The aim was to develop potential practical solutions; such as improved detection of software vulnerabilities that might decrease software resiliency or be exploitable by potential hackers.

Around seventy data science researchers took part in the Data Study Group, drawn from universities from around the UK and with specialisms ranging from machine learning, computer science and deep learning.

Technical support for those participating was provided by Dstl staff, contributing and actively supporting the study groups.

Results are expected to be applied in real world situations and to indicate where more work with The Alan Turing Institute is needed.

Glen Hart, technical lead for Dstl, said:

This was, in effect, a data-centric hackathon where the brightest minds tackled some of the biggest data issues for defence today. It's fantastic to be partnering with the Institute and fascinating to see how different approaches can help defence, security and beyond.

And if you think you've got what it takes to answer questions like those set for the data study group, here's a brand new challenge set by Dstl's very best data scientists!

Repeated patterns can often be illustrative of underlying information within data. There is some information hidden in the following phrase, which relates to what Dstl, GCHQ and the Alan Turing Institute are looking for: "We draw cartoons to invent signals for insight and jest."

Follow us on Twitter @dstlmod and we will announce the answer soon!

Find out about current [data science roles](#)

Find out more about the Turing's Data Study Group series and our [partnership](#)