Press release: Farming robots and eco-buildings the future as research kick-starts new innovations

- New research will look at how robots can help boost English farms productivity and produce more food through the world's first farming robotics centre.
- Industrial Strategy Projects will look at challenges of the future, including the UK's transition to a net-zero economy.
- The £76 million government investment is part of the modern Industrial Strategy – boosting research that will keep the UK a world leader in science, research and innovation.

Farming robots could help tend and quality control high-value crops in the world's first ever agri-robotics centre at The University of Lincoln.

The research centre will be one of 13 government backed projects to benefit from a share of £76 million to work on ground-breaking research. Bringing experts together, the programme will tackle a broad range of research challenges, from speeding up crop production, to creating environmentally-friendly offices and homes, and how engineering enzymes could break down common single-use plastics.

Announcing the 13 projects, Universities and Science Minister Chris Skidmore said:

> Pushing the boundaries of knowledge and conquering new innovations are what our universities are known for the world over.
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> The Expanding Excellence in England Fund will support projects throughout England to master new and developing areas of research and industry.
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> Made possible through our record R&D spend delivered by our modern Industrial Strategy, the investment will support researchers to develop solutions and opportunities for UK researchers and businesses.

The projects, based at universities in England, have received shares of £76 million which will see their work develop over three years. The investment could further existing projects, or support a new area of research, all with the view to improve people's lives using the benefits of technology.

The investment, through the modern Industrial Strategy, contributes to the government's commitment to raise public and private sector R&D spend to 2.4% of GDP by 2027. The funding announced today is initial funding, with the

option for teams to build collaborative relationships with business and attract investment.

The research units are being funded through the [Expanding Excellence in Research Fund](#), administered by Research England, part of UK Research and Innovation. The units are either physical hubs or teams of researchers.

UK Research and Innovation Chief Executive, Professor Sir Mark Walport, said:

> The Expanding Excellence in England Fund reflects UKRI's vision to enhance academic excellence, foster collaboration and increase access to new technologies.
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> The first research units awarded this funding demonstrate the breadth and diversity of talent in UKRI's portfolio, from astrobiology through to forensic linguistics and climate change, and our commitment to tackling important research questions in a changing world.

1. Aston University 'Aston Institute for Forensic Linguistics' will analyse text and the use of linguistics in legal contexts, such as in court, ultimately resulting in a databank of research that could be instrumental in legal cases where forensic speech science is used to build a case against an individual. This project will be receiving £5,434,597.
2. University of Portsmouth 'Centre for Enzyme Innovation' will look at how engineering enzymes could break down common single-use plastics which will contribute to a circular economy. This project will be receiving £5,828,000.
3. Open University 'Astrobiology Research Unit' will seek to answer questions in space exploration and boost understanding of extra-terrestrial environments and potential life, and consider how the private sector and smaller nations can address space governance through ensuring environmental sustainability of missions, for example. This project will be receiving £6,737,350.
4. University of Greenwich 'Natural Resources Institute' will address food and nutrition security in less developed countries, particularly in Africa. The project will adopt a food systems approach and will focus on climate change, sustainable agriculture, food loss and waste and nutrition. This project will be receiving £7,495,984.
5. University of Lincoln 'Lincoln Agri Robotics' will create the world's first centre of excellence in Agri-Robotics that will look at how robots can tend, harvest and quality control high-value crops with minimum human intervention. This project will be receiving £6,344,000.
6. Loughborough University 'Centre for Mathematical Cognition' will study mathematic learning processes and use resulting insights to evaluate what educational interventions could boost student success at mathematics and address the STEM skills gap. By working with schools and colleges, the team will ensure the work addresses classroom priorities. This project will be receiving £6,594,814.

7. University of Lancaster 'ImaginationLancaster' will research how factors in society – such as academia, society and policy – could lead to new innovations to address challenges of tomorrow and create new products and services, with a focus on the design and how these can best support people. This project will be receiving £7,636,606.
8. Sheffield Hallam University 'Lab4Living' will focus on enabling older people to live longer and more productive lives by considering societal and economic barriers that could prevent people living to 100 years old. This project will be receiving £4,027,482.
9. University of Newcastle (with Northumbria University) 'Hub for Biotechnology in the Built Environment' will look to create a new generation of buildings – from offices to homes – that are responsive to the environment, consume their own waste and benefit human health. This project will be receiving £8,000,000.
10. University of the West of England 'Centre for Fine Print Research' will boost its knowledge of 19th century printing and fabrication to develop new products such as prototypes of ancient artefacts using 3D printing. The work will enable more research to be conducted due to making replicas of ancient artefacts available. This project will be receiving £7,718,713.
11. University of Surrey 'Centre for Translation Studies' will seek to establish a centre enabling automation to respond to different spoken languages, enabling a responsible integration of human and machine translation as automation continues to spread in industries across the economy. This project will be receiving £3,564,000.
12. Royal Northern College of Music 'Practice and Research in Science and Music' will seek to bring musicians and technology experts together to consider the role AI and big data could play in musical performances, enhancing the experience of the audience and leading to new innovations that could be used in countries around the world. This project will be receiving £914,000.
13. University of Exeter 'Diabetes Research Unit/Aetiological Insights' will boost diabetes research by combining it with new technology approaches including artificial intelligence and data science. This project will be receiving £5,984,000.