

# [New £65 million package for 5G trials](#)

**Rural areas will benefit from a series of government-funded trials to help them seize the potential of modern technology, the Digital Secretary Oliver Dowden announced today.**

Nine projects across the country will receive a share of £35 million from our rural and industrial 5G competitions, and a new £30 million open competition – 5G Create – will look at how 5G can create new opportunities in industries including film, TV, video games, logistics and tourism.

Sherwood Forest in Nottinghamshire will see cutting-edge apps transform the visitor experience, with Robin Hood telling the history of the medieval forest via virtual and augmented reality on 5G networks. New robotic environmental management will also be tested alongside live monitoring of the health of Sherwood Forest to preserve the site for future generations.

Funding will also go to 5G trials in air and sea search and rescue in Dorset to help save lives using terrestrial and satellite connectivity. This project will also trial 5G connectivity for remote farms to track crop growth, monitor livestock and reduce water pollution using 5G.

These new trials will help spread the benefits of technology across the country and allow the UK to grasp an early advantage by using the new applications 5G networks can enable.

This forms part of our £200 million investment in testbeds and trials across the UK to explore new ways that 5G can boost business growth and productivity, improve the lives of people in rural areas and maximise the productivity benefits of new technologies. Our innovative trials will also support the Government's ambition to diversify the supply chain for digital infrastructure in the UK, a key recommendation from the Supply Chain Review.

**Digital Secretary Oliver Dowden said:**

We're determined to make the UK a world-leader in 5G and deliver on our promise to improve connections for people and businesses across the country.

Today we're announcing new funding to seize the new opportunities this technology will offer us.

This includes seeing how it could create new jobs in the countryside, make businesses more productive and unleash even more ideas in our cutting-edge creative industries.

**Councillor Kay Cutts, leader of Nottinghamshire County Council, said:**

This project will be front and centre of retelling the story of Robin Hood to future generations. It will be situated in the ancient royal forest of Sherwood, which has been wooded since the end of the last Glacial Period. There is no better opportunity to trial 5G in a forest setting anywhere else in the UK – not just for the area's geography, but for its rich and fascinating history.

I see this project as the start of a journey that will truly see Nottinghamshire on the regional, national and international tourism and environment management maps; as well as providing us with the opportunity to build the digital skills and opportunities of our residents and businesses.

**Research lead professor Mohammad Patwary, from Birmingham City University, said:**

This is a unique opportunity for the UK to become a world-leader exploiting the technological innovation that 5G can offer by developing and using innovative technology for destination branding for the visitor economy, preserving the wellbeing of the environment, and creating a scalable and sustainable commercial grade experimental network; a world first.

5G has speeds up to ten times faster than 4G and will greatly increase mobile capacity across the UK, meaning more people will be able to get online and find and download the content they want, without slowdown.

But 5G is about more than a speedier internet connection. It uses technology that is far more advanced than that of our current mobile networks, so as time goes on it could transform the way we interact with critical services – from energy and water, to transport and healthcare.

It will also drive the adoption of new technologies such as driverless cars, remote healthcare and the 'smart' devices we increasingly use in our homes and at work.

**The £65 million package announced today includes:**

- £30 million for the Rural Connected Communities (RCC) competition for seven 5G research and development projects across the UK. This includes five in England, one in Wales and one in Scotland with plans to expand into Northern Ireland. Test sites will be set up in Yorkshire, Gwent, Monmouthshire, Orkney, Wiltshire, Nottinghamshire, Dorset, Shropshire and Worcestershire.
- More than £5 million of funding will be awarded to two industrial projects, led by Ford Motor Company and Zeetta Networks, to test the benefits of using 5G to boost productivity in the manufacturing sector.

- A new £30 million open competition – 5G Create – has been launched to develop new uses for 5G in a variety of industries, including our creative sectors such as film, TV and video games. From enabling remote production to supporting the expansion of the increasingly popular world of esports, 5G has the potential to revolutionise the UK's booming creative industries.

**Tim Davie, Co-Chair of the Creative Industries Council and CEO of BBC Studios, said:**

The Creative Industries Council is delighted that DCMS is launching 5G Create. We have been advocating a funded competition along these lines, as an exciting opportunity for UK creative companies to develop innovative products and services using this transformational technology. 5G offers innovative opportunities right across the sector from film and tv, to games, to music, fashion and advertising. We hope that start-ups and well-established companies alike will bid for the available funds.

The new 5G Create competition will open in early March and run until the end of June.

**ENDS**

#### **More information on the projects**

While the commercial rollout of 5G by mobile companies continues at pace, the government is investing in these testbeds to push the envelope of what high speed connectivity can do across a range of industries and geographic areas.

International firms, SMEs, public sector organisations and universities will come together to prove new ways for 5G to transform rural tourism and farming, tackle loneliness and improve digital skills in some of the UK's remote areas from the Orkney Islands to the Chalke Valley. In North Yorkshire, 5G will be used to monitor the environment to give the county council and its partners an early warning system for flooding.

In the industrial projects, UK tech company Zeetta will lead 5G-ENCODE based at Bristol's National Composites Centre. It will experiment with how 5G can improve the design and manufacture of composite materials, including through augmented reality and the remote monitoring of multiple factories at once. Vodafone Business and Ford will lead a consortium trialling how 5G mobile private networks can improve the manufacture of electric vehicles at two sites in Essex and Cambridge.

5G Create is an open competition with the Government hoping to attract bids from a variety of industries where the UK has a competitive advantage, encouraging dynamic business models and opening up new opportunities and markets. This includes our creative industries but also our rich variety of technology businesses in sectors such as energy, water, health and social care and logistics.

None of the winning projects, or future projects from 5G Create, will use equipment from high risk vendors.

#### **Rural Connected Communities Projects**

##### **Mobile Access North Yorkshire (MANY)**

**Government funding: £4,431,677**

##### **Project Summary**

The Mobile Access North Yorkshire (MANY) project will support the development of future rural connectivity in the county by developing new technologies, apps and services tailored for rural areas. These will focus on tourism, mental health, coverage for emergency services and environmental management.

The project will build small mobile phone networks in areas that have no mobile coverage. It aims to understand how the public, private and community sectors can work together to reduce the cost of delivering mobile access in rural areas. The project is led by Quickline Communications, the largest wireless ISP in the country working with North Yorkshire County Council, two universities and four small businesses.

**Steve Jagger, Managing Director, Quickline said:**

Quickline's mission is to use innovation in equipment and approach to bring ubiquitous coverage of high speed data and associated services across the harder to reach parts of the country. We are pleased to be part of a project that shares these values and outcomes and are excited by the opportunity to push the boundaries further.

#### **West Mercia Rural 5G**

**Government funding: £3,285,705**

##### **Project Summary**

Operating in the rural area where the counties of Shropshire and Worcestershire meet, 'West Mercia Rural 5G' will explore infrastructure challenges when planning, building and operating a rural 5G network and look at how 5G can enhance services for the benefit of residents, particularly researching 5G enabled health and social care applications.

Led by Worcestershire County Council, key partners on the network side are Airband and Three who will plan, build and operate the 5G network. Local NHS organisations alongside Worcestershire County Council and Shropshire Council will work on the health and social care applications. The University of Worcester, University Centre Shrewsbury, and West Midlands Academic Health Science Network are providing their expert support across the project.

**Councillor Ken Pollock, Worcestershire County Council's cabinet member with responsibility for economy and infrastructure, said:**

Worcestershire County Council are delighted to have been successful in leading a bid which will investigate the positive impacts that emerging 5G technologies could have on rural communities, around how 5G networks can be built and their use in supporting health and social care services. The project highlights the huge joint ambitions of the innovative public and private sector partners we have drawn together, as we strive to find ways to improve connectivity and provide access to key services in rural areas.

At a time of increasing demand for public services, improvements in connected technologies offer new ways of working that can help maintain and improve service delivery and quality of life for residents and businesses alike.

#### **5G Connected Forest**

**Government funding: £4,975,948**

#### **Project Summary**

Centred around the ancient Sherwood Forest, the focus of the 5G Connected Forest project will be to explore the potential for 5G applications in the preservation of forests and their environment, and in enhancing the experience of visitors to the forest and surrounding area.

From robotic environmental management and non-intrusive live monitoring of the health of a forest, to live AR and VR experiences for visitors of all ages, and inspiring public transport users; the project will also investigate business models that can enable operators to boost rural connectivity and create innovative applications with the potential for commercial development.

**Councillor Kay Cutts, Leader of Nottinghamshire County Council said:**

This project will be front and centre of retelling the story of Robin Hood to future generations. It will be situated in the ancient royal forest of Sherwood, which has been wooded since the end of the last Glacial Period. There is no better opportunity to trial 5G in a forest setting anywhere else in the UK – not just for the area's geography, but for its rich and fascinating history.

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**MONeH (Multi Operator Neutral Host)**

**Government funding: £2,359,762**

**Project Summary**

The MONeH Consortium, led by Telet Research, CH4LKE Mobile and Associated Networks, aims to demonstrate how multi-operator, neutral host cellular networks based upon small cell technology can be used to provide multiple user slices, serving different customer groups within rural areas with little or no coverage. Initial deployment will be in the Chalke Valley, South West Wiltshire with two other sites in Preston Bissett, Buckinghamshire and Lucknam Park, near Bath.

Deployments will utilise unused mobile spectrum, using the new Ofcom-issued Local Access licencing procedures to offer a service that is both technically and financially robust in areas where conventional coverage solutions are not commercially viable for mobile network operators or cannot scale to cover small areas.

**James Body, Technical Architect of the MONeH Consortium, said:**

Instead of building large, expensive and unpopular large masts in our rural areas, we can use inexpensive low power small cells to provide a quality local service to users of all mobile networks, in addition to Emergency Services, National Health Service, Utility companies and any other local private users in a rapidly deployable and cost effective manner. Empowering local organizations to deploy their own networks offers reduced costs, shorter build times and the ability to provide coverage where it is really needed.

**5G RuralDorset**

**Government funding: £4,335,000**

**Project Summary**

Coastal public services – using 5G to save lives and enhance safety in coastal areas focusing on incident prevention. Using terrestrial and satellite connectivity, we aim to track critical equipment and pilot advanced search and rescue techniques.

Agri-tech – how connectivity needed by remote farms can be delivered cost-effectively. We will pilot leading-edge agricultural technologies to track crop growth, monitor livestock and reduce water pollution.

Commercial connectivity – new 5G services on the Lulworth Estate and festival site, unlocking potential social and commercial uses from tourism and education to safety.

5G innovation hub – developing Dorset Innovation Park (formerly Winfrith) to allow existing and new businesses to test and develop 5G products and services collaboratively and securely.

**Deputy Leader of Dorset Council Peter Wharf said:**

We are delighted to receive this funding. Improved connectivity is critical to our smart rural place aspirations and making Dorset a great place to live, work and visit.

Introduced sensitively in our world-famous UNESCO-recognised coastline and the wider environment, 5G can help keep vulnerable people safe and well, deliver economic growth, and provide enhanced educational and social opportunities.

The 5G RuralDorset project is an exciting opportunity for our county to become a leader in Europe, showing how next generation connectivity can positively transform lives in rural communities. We look forward to sharing our learning experiences with other parts of the UK.

## **5G New Thinking**

**Government funding: £5,000,000**

### **Project Summary**

The 5G New Thinking project will look at the provision of mobile/wireless connectivity primarily using the shared spectrum and local spectrum licencing options announced by Ofcom in July 2019. Working closely with communities, the project will develop a community toolkit to allow the creation of networks that provide rural connectivity for cooperatives of consumers, local enterprise, councils and other stakeholders. The project will work to create facilities and tools for spectrum sharing and monitoring, neutral hosting, partnerships and B2B engagement models with operators. In its first stage the project will create models, strategies and use case demonstrators on the Orkney Islands network, and engage forward with community and council partners in Borderlands, Scotland, Northern Ireland and areas of rural England to help develop and ultimately roll-out 5G connectivity.

**Dez O' Connor, Cisco and Chief Technologist of 5G New Thinking Project, said:**

We're excited to be working on this new and ambitious rural connected community project with DCMS. The new project, 5G New Thinking, aims to showcase the benefits of 5G rural connectivity and sustainability. Cisco and its partners are bringing forward extensive knowledge from recent projects, including 5G RuralFirst based in Orkney, Somerset and Shropshire.

We're pleased to be working again with principal partner, University of Strathclyde, and others including BBC R&D, CloudNet IT Solutions, and also new partners such as Federated Wireless, Pure Leapfrog and the Scotland 5G Centre. With key ingredients of spectrum, cloud and core, backhaul, and community/civic engagement the project will look at how it can help to address some of the most pressing technology challenges to help the UK in improving connectivity across rural, and indeed so called ultra-rural areas.

### **Connected Communities in the Rural Economy (CoCoRE)**

**Government funding: £5,000,000**

#### **Project summary**

The project will connect rural communities by demonstrating how 5G technology can open up new opportunities for businesses and citizens. It's focus is centred upon the south east Wales rural region of Monmouthshire and its neighbour Blaenau Gwent. We will innovate in areas such as 'immersive tourism' and 'farming security' as key parts of the rural economy, whilst leveraging related technologies such as Artificial Intelligence, the Internet of Things and Cyber Security as part of an 'innovation platform'. Everyone in every industry will feel the positive effects of 5G and we aim to put rural Wales at the front of the queue through our 'Connected Communities in the Rural Economy' project.

#### **Secretary of State for Wales Simon Hart said:**

The UK Government is committed to eliminating the difference in connection between urban and rural areas whilst exploring innovative ways to use 5G technology to develop emerging industries, supporting our rural economy in Wales.

Today's announcement is a great opportunity for rural parts of Wales to boost the productivity and capacity of their digital infrastructure and forms a key part of our plans to build a UK which is fit for the future.

#### **Industrial 5G Projects**

#### **5GEM – 5G Enabled Manufacture**



**Government funding: £1,942,275**

### **Project Summary**

This project will focus on the use of 5G in manufacturing to connect machines allowing real-time feedback, control, analysis and remote expert support. Two Vodafone mobile private networks will be installed in Ford Motor Company's Dunton facility and TWI Cambridge, respectively. Ford will focus on the connectivity of welding processes, used in the manufacture of electric vehicles. TWI will support Vacuum Furnace Engineering in connecting their heat treatment equipment. ATS, TM Forum, HSSMI and Lancaster University join the consortium to work on the associated challenges such as cyber security, scale-up, standards, machine learning and developing the 5G technology for an industrial environment.

**Chris White, Ford 5GEM Project Lead, said:**

Connecting today's shopfloor requires significant time and investment. The technology used is inflexible and bespoke. It can often be viewed as the limiting factor in reconfiguring and deploying reliable manufacturing systems. 5G presents the opportunity to transform the speed of launch and flexibility of present manufacturing facilities, moving us towards tomorrow's factories with mobile assets, remote computing, remote expert support and artificial intelligence.

Through 5GEM, we will build two demonstrators to accelerate this transformation within the UK and beyond. These test beds will be an excellent environment for our partners to resolve the issues around making this technology shop floor ready and supporting the fourth industrial revolution.

### **5G ENCODE**

**Government funding: £3,822,760**

### **Project Summary**

Zeetta, a UK technology company, has been selected to lead the £9m DCMS-funded 5G-ENCODE project at the National Composites Centre (NCC) in Bristol.

The consortium comprises ten companies including Telefonica, Siemens, Toshiba, Solvay and Baker Hughes. Zeetta will be offering its multi-domain orchestration technology based on 5G network splicing and slicing.

The project will examine new business models for private mobile networks in the manufacturing sector. It will investigate three key industrial 5G use cases to improve productivity and effectiveness of composite design and manufacture: interactive augmented reality (AR); asset tracking across multiple sites and locations; and industrial system management.

The 5G-ENCODE project will start in February 2020 and will run until March 2022.

**Vassilis Seferidis, CEO of Zeetta Networks, said:**

Zeetta is proud to be leading the 5G-ENCODE project on behalf of a consortium of leading industrial innovators. The company has a strong track record of delivering 5G solutions based on our network splicing™ and slicing technology which is a key enabler in delivering multi-domain orchestration across public and private networks for a seamless and customised delivery of 5G services. The ability to dynamically slice and dice the resources of the network according to the demands of users and applications is the fundamental difference between 5G and older technologies and it is expected to play a transformational role in improving industrial productivity.

**Notes to editors**

DCMS press office can be contacted on 020 7211 2210.