5G Takes Root: Virgin Media O2 Business kicks off Private Network trials at Worcestershire 'Farm of the Future'

Penelope Bossom, owner, Overbury Farms

- Virgin Media O2 Business and River Severn Advanced Wireless Innovation Region (RSAWIR) announce a new partnership to showcase the benefits of 5G connectivity in farming.
- A portable 5G Private Network will be installed at Overbury Farms, where trials using cutting edge technology like AI cameras and IoT devices will take place.
- Showcasing a farm of the future, the trials aim to boost farm efficiency, enhance animal welfare and reduce environmental impact.
- This work is part of the UK Government's initiative to demonstrate 5G technology in rural regions, with RSPAWIR being one of the 10 areas chosen by the Department for Science, Innovation, and Technology (DSIT) to receive £3.75 million in funding.

Virgin Media O2 Business and River Severn Partnership Advanced Wireless Innovation Region (RSPAWIR) announced a new collaboration to trial cutting edge 5G connectivity at Overbury Farms on the border between Worcestershire and Gloucestershire. By installing a portable 5G Private Network on the farm, this trial will showcase innovative use cases, laying the groundwork for the connected farms of the future and demonstrating the transformative power of technology in crop protection and environmental preservation.

Overbury Farms, a 1,600-hectare award-winning estate and the chosen trial site, has long been a leader in digital farming, utilising connected tractors, Internet of Things (IoT)-enabled weather stations, and real-time data analytics. The farm will now serve as the ultimate testbed for the portable 5G Private Network, covering a 1-kilometre trial area to unlock advanced applications for farming, driving the future of agriculture.

This project is part of the UK Government's initiative to demonstrate the potential of 5G technology across the UK. The River Severn Catchment is one of the 10 5G Innovation Regions chosen by the Department for Science, Innovation, and Technology (DSIT) to receive £3.75 million in funding; this will be used to demonstrate the benefits of wireless technology for agriculture, water management and the public sector, managed by Shropshire Council.

The portable Private Network, which will be installed at Overbury Farms this month, aims to showcase the benefits advanced connectivity can bring to the agricultural sector. Several 5G-enabled solutions will be used aimed at improving farm efficiency and animal welfare, while reducing the impact on the environment. This includes:

- **Outdoor and indoor AI-enabled pest observation:** Connecting existing cabbage stem flea beetle camera traps and deploying new aphid and ladybird trained camera traps, allowing the farm to take early action and reduce the amount of pesticides used to control potential infestations.
- **IoT water quality checks:** Sensors will be installed to remotely identify the level of nitrates in the local stream, which combined with Meteoblue's weather model can help determine fertiliser application timings to gain optimal soil moisture conditions and monitor what others do to the water courses running through the farm
- **Water level troughs:** Monitoring water levels in the livestock and racehorse troughs, saving time from physical observations and ensuring water is always available for the animals.
- **Liquid fertiliser levels:** Preventing manual checks for fertiliser tanks, the monitors will trigger alerts for any potential leakages to quickly address the leak and help reduce the environmental impact of any such event, as well as reducing checking time for stock control
- **Weather station:** Ensuring yield quality by collecting information on soil moisture, wind speed, rain gauge and temperature. Correlated with weather forecasting and disease modelling to increase accuracy and support the farm in daily decision making.

Committing to share the findings from this innovative trial, **Penelope Bossom, Overbury Farms' owner,** commented: "This exciting collaboration will give us the opportunity to test a variety of sensors collecting data over a private 5G network. The benefits of better information, warnings and the collation of data will provide new opportunities to our sector. Hopefully, we will overcome the constraints of variable connectivity to show the benefits of the network technology for a business in the countryside." Paving the way for further 5G-driven innovation in the agricultural sector, Overbury is a member of AgritechE, an organisation that brings farming experts together to foster new innovations in the Agritech space. They've also been an AgriEPI (now the UK Agri-Tech Centre) satellite farm.

Andres Cruz Gordon, Private Networks Director at Virgin Media O2 Business, said: "Building on Virgin Media O2 Business' expertise in deploying Private Networks, this new project with River Severn Partnership Advanced Wireless Innovation Region is a great opportunity to demonstrate the possibilities that advanced connectivity can unlock. From AI-enabled insect traps to weather stations powered by sophisticated weather models, the applications tapped into at the farm will increase both safety and efficiency on site. This work will serve as an industry showcase of how 5G can accelerate digital farming plans and benefit the UK economy."

This work underscores Virgin Media O2 Business' leadership in deploying 5G Private Networks. Last year, the company announced a strategic partnership with Accenture to expand its private 5G network solutions across a range of industries, including agriculture. The UK's growing mobile Private Network market is estimated to reach £528M by 2030, with potential to generate further value through industry-focused applications supported by this connectivity.

Matt Smith, RSPAWIR Programme Manager, said: "This project brings together a forward thinking, environmentally conscious and tech-curious local farm, an innovative public sector partnership with government support and a high-profile Mobile Network Operator in Virgin Media O2 Business who have an appetite to transform rural connectivity. Our collaboration marks an exciting step forward in demonstrating the practical benefits of 5G technology for rural communities."

2025 sees Virgin Media O2 complete major steps to evolve its mobile network

Virgin Media O2 is to carry out major programmes to evolve its mobile network to be fit for the future, including deploying additional spectrum, harnessing artificial intelligence, and decommissioning outdated parts of the network, including the 3G network. Decommissioning this legacy network will allow Virgin Media O2 to focus investment into more energy efficient and higher capacity future networks, and harnessing AI will enable the operator to unlock efficiencies that will be reinvested to improve the network experience.

Virgin Media O2's Mobile Transformation Plan will focus investment into parts of the network that experience the highest levels of demand and areas where connectivity is most critical. Priority areas where the operator is looking to deliver significant improvements include:

- **Railways:** Enhancing connectivity for VMO2's customers at stations and on trains, which poll as one of the top three locations where the public want to see improved connectivity
- **Roads:** Strengthening coverage along motorways and major routes, ensuring consistent service for the two thirds of Brits who rely on connectivity for GPS maps when driving
- **Dense urban areas:** Continuing to deploy small cells in cities across the UK, to boost capacity in some of the most high-demand locations
- **Hard to reach remote locations:** Tackling long term not-spots with innovative solutions such as satellite backhaul to connect some of the most difficult to reach areas of the UK
- **Stadiums and Venues:** Deploying Distributed Antenna Systems (DAS) and dedicated networks to ensure uninterrupted connectivity for attendees at live events, which rank in the top 10 for the general public when it comes to desire for unfaltering connectivity

Jeanie York, Chief Technology Officer, Virgin Media O2 said "Virgin Media O2 is committed to providing our customers with a reliable connectivity experience wherever they are. Our Mobile Transformation Plan combines the necessary financial investment with the latest technological innovation to make this a reality."

"We're not just upgrading infrastructure; we're creating a platform for future innovation. This programme ensures our customers will continue to benefit from superior reliability as new technologies and demands emerge."

The programme forms part of Virgin Media O2's wider £2bn investment this year in its fixed and mobile networks and services to provide customers across the UK with the best experience possible.

Jeanie York, CTO Virgin Media 02

INCA Welcomes Ofcom's Latest Announcement on Full-Fibre Broadband Rollout

The Independent Networks Cooperative Association (INCA) has welcomed Ofcom's proposals to boost competition in the fibre market.

Ofcom today published proposals to further boost competition and investment in full-fibre connections, which – according to telecoms industry data - could reach 96% of homes and businesses within the next two years.

Commenting on the proposals, INCA, which represents the independent gigabit-capable broadband providers (known as Altnets) across the country, said: "This review is a critical step in shaping the future of the UK's broadband sector, and we look forward to working with Ofcom in the coming weeks to ensure the right balance is struck between investment, innovation, and fair competition.

"There are clear positives in this review, and as we work through the specifics, INCA will champion the need for strong regulatory safeguards to ensure fair competition and long-term market sustainability.

"Done right, by 2030, we should have a healthier, more dynamic marketplace where consumers enjoy the fruits of network competition – faster speeds, better service, and innovative offerings – and altnet providers are an integral part of that success."

Announcing its consultation - Promoting Competition and Investment in Fibre Networks: Telecoms Access Review 2026-31- Ofcom set out its proposals to regulate the fixed telecoms markets that underpin broadband, mobile and business connections.

Its consultation, which is now open, closes at 5pm on June 12, 2025.

Gigabit broadband reaches nearly 85% of UK premises

Eighty-four per cent of UK premises are able to get gigabit-capable broadband, according to new Ofcom data published today, meaning internet companies are on track to meet the UK Government's initial target of 85% Gigabit coverage by the end of 2025.

The figures, which come from Ofcom's Connected Nations Spring update, show that in January 27.2 million premises (84%) could access broadband with speeds of 1000Mbit/s or more, up from 82% in July 2024.

Ofcom's new data also shows that nearly three-quarters of premises (73% or 23.7 million) can access full-fibre broadband, which uses fibre-optic cables to deliver faster and more reliable internet connections, up from 67% last year.

Progress in reducing the number of premises unable to get decent broadband, defined by the Government as download speeds of at least 10Mbit/s and upload speeds of 1Mbit/s, has also continued. 48,000 properties are without access to decent broadband, down from 58,000 last year. This is expected to drop further as publicly funded schemes roll out better broadband to the most rural and remote communities.

Mobile coverage has remained stable since September 2024, with around 96% of the UK landmass predicted to have good outdoor 4G coverage from at least one mobile network operator. 5G coverage has also remained stable over the previous four months, with around 62% of the UK landmass predicted to have 5G coverage from at least one mobile network operator.

IQGeo enters exclusive negotiations to acquire AI software developer Deepomatic

Corporate SCTE Member IQGeo, a developer of geospatial software that is "Building Better Networks" for telecom and utility operators, has announced that exclusive negotiations are underway with the goal of acquiring the AI computer vision software developer Deepomatic. The addition of Deepomatic's AI capabilities will enable IQGeo to enhance its network lifecycle solutions with optimised detail capture and analysis in field operations, creating resilient and efficient broadband and utility networks.

Deepomatic's software is already deployed globally and has processed more than 20 million jobs in the past year alone, including over half a billion transactions from more than 30,000 daily field users. Using AI-powered computer vision technology, it dynamically analyses photos taken by field engineers to identify and eliminate errors for rapid, actionable quality control. Operational use cases range from fibre network construction and service activation to meter installations, asset inspections and damage assessment. AI-powered processes ensure 'right-first-time' field tasks, reducing costs and improving workflow efficiency while enhancing network data quality.

As an existing technology partner within IQGeo's ecosystem, Deepomatic and IQGeo already have software integrations in place to support joint customers, with additional projects underway. Combined with IQGeo's Workflow Manager and Network Manager Telecom, the Deepomatic software provides unmatched geospatial asset intelligence to help network operators create more sustainable and profitable infrastructure.

"We are looking forward to have Deepomatic join the IQGeo team once negotiations are completed and all the required legal and regulatory processes have been undertaken" commented Richard Petti, CEO at IQGeo. "Their AI computer vision software brings a new dimension of network intelligence to our customers, accelerating performance across the operational lifecycle.

Deepomatic is already delivering amazing quality control and efficiency benefits to telecom and utility operators and their AI skillset will be strategic in realising our vision of a predictive and proactive network model. Our combined technology will unlock enormous technical and business opportunities, offering greater speed, precision and insights, so together we can deliver the future today."

Augustin Marty, CEO of Deepomatic, explained: "By integrating our AI computer vision software with IQGeo's geospatial expertise, we will be able to redefine what's possible by empowering companies to create data-driven digital twins. AI is fast becoming integral to successful infrastructure management, and together we will expand our industry footprint, ensuring operators have real-time, end-to-end visibility of their networks."

The proposed acquisition would mark an important step in expanding IQGeo's technology portfolio to meet the evolving needs of telecom and utility customers. Following the investment in IQGeo from leading global investment firm KKR in September 2024, the company has focused on accelerating its product innovation, expanding internationally and further strengthening its leadership position in geospatial network management software. Rami Bibi, Managing Director and Head of EMEA for KKR Global Impact, added: "We are proud to support the next step in IQGeo's growth with Deepomatic. This planned transaction and our continued investment in IQGeo closely align with KKR's commitment to supporting cutting-edge technology companies that play a critical role in enabling digital connectivity and accelerating the energy transition."

Augustin Marty, CEO, Deepomatic

Richard Petti, CEO, IQGEO

INTERNATIONAL YEAR OF Quantum Science and Technology

To celebrate 100 years of Quantum Mechanics theory, UNESCO has declared 2025 the International Year of Quantum Science and Technology **https://quantum2025.org/**

Despite the fact that the majority of specialists working in Quantum Science today are physicists, the real question for the rest of us is what does Quantum Technologies have in store for telecoms engineers?

The global quantum networking market growth is estimated to rise by 44% per year from 2024 to 2029 according to a recent report of Markets & Markets. This translates as a rise from USD $861.8 million in 2024 to USD $5,382.0 million by 2029. Awareness of Quantum Computing is low at present, but these estimates confidently demonstrate the growth potential ahead of us.

The European Quantum Flagship is highlighting the eight base competencies required in the near future and one of them is Quantum Communications & Networks, where areas like Quantum Networks, Quantum Data Center, Quantum Internet, Teleportation etc are being explored.

In Europe there are already eight countries with National Strategies for Quantum Development, but even so, we are well behind US and China/Asia. The biggest investments in quantum in Europe so far have been made by the UK government, which in 2023 introduced a 10-year vision plan. At present, there are five quantum hubs in the UK; among them is IQN, the UK Integrated Quantum Networks Hub Welcome - The UK Integrated Quantum Networks Hub led by Institute of Photonics and Quantum Sciences from Heriot-Watt University from Edinburgh. This particular hub's vision aligns with the UK Government's national quantum strategy, which sets out an ambitious goal: by 2035, the UK will have deployed the world's most advanced quantum network infrastructure.

It is worth mentioning that there is already an online resource created by the UK National Quantum Technologies Programme and its partners, setting out the range of opportunities and societal benefits that the next generation of quantum technologies will provide. They feel that the resource speaks to the 'growing need for the quantum community to tell its own story'.

THE QUANTUM CITY

For future communications, experts created two types of quantum communications: up to 140km using existing fibre optic networks (in UK) and up to 12,900km over satellite. In the UK, 410km has proved to be the longest communication over a quantum network with QKD – Quantum Key Distribution so far and Deutsch Telekom's T-Labs sustained 99% fidelity transmission of polarisation-entangled photons over 30 km of commercial fibre for 17 days.

The future of the fibre optic network is a quantum network and it requires specialists, experts, education and training either from or for actual telecom engineers in the near future.