

Digital inclusion needed to drive network-wide sustainability

It is one thing to talk about sustainability, but practical solutions are needed in order to really make a difference. If we truly want to extend the life of the planet, achieve net-zero emissions and build a better country for future generations, we need to enhance the physical infrastructure around us.

Real assets play a key role in providing solutions to the most pressing sustainability issues – including waste management, food production, biodiversity loss, energy consumption, health protection, as well as improving the way we travel, work and learn.

Of structural importance

While connectivity may seem unrelated to sustainability, it underpins everything we do. Connectivity is at the heart of how we can better treat people and the planet.

For example, without reliable high-speed broadband infrastructure, the video-based services crucial to increased social inclusion – such as remote learning and working, and tele-health – will simply not be realised. Fast broadband is

also pivotal to a growing number of industries, like the rise of data monitoring in agriculture.

The digital revolution has clearly arrived, but the success of new-age technologies such as electric vehicles and continued industrial automation also hinges on strong connectivity.

As the tech transformation takes hold, digital skills are becoming an imperative for connecting with others, accessing information and services, and meeting the changing demands of the workplace and economy. In fact, experts predict a whopping 85% of jobs in the digital economy of 2030 do not yet exist today.

Not fit for purpose

Despite the spike in remote working and learning due to COVID-19 lockdowns over the past year, the pandemic has highlighted the shortcomings of the existing UK copper-based broadband network. Many households have experienced significant service problems and poor video connections due to multiple occupants simultaneously using the network.

This is a direct result of the trade-off made by the network architects to constrain upload speeds for the sake of headline download speeds. Upload speed is necessary for video calls and content creation, which is taking on more importance socially and in the workplace.

COVID-19 has also shone a light on 1.5 million homes in the UK that still do not have internet access – usually a product of age, region, socioeconomic and disability status. Meanwhile, in rural areas, a fifth of households cannot get superfast broadband and many still see internet speeds as slow as 0.12Mbps – which is 5,000 times slower than the fastest street in the UK – and people usually do not have the luxury of switching to mobile-based services in these locations. The impact of poor connectivity in these areas has been severe, acting as an obstacle to growth. For 90% of farmers, high-speed broadband is essential for their business.

Multi-year trend

As the government turns its attention to upgrading the UK's broadband connectivity, there are increasing fears rural areas will be left even further behind.

We have invested in [Wildanet](#) and [Borderlink](#), which are building new broadband infrastructure for underserved rural communities in Cornwall and the north of the UK – Scotland, Cumbria and Northumberland – respectively.

These alternative network providers are targeting broadband speeds as high as 10 gigabits – compared to the UK average of about 65 megabits – while supporting 5G mobile data coverage, which requires much more densely populated mobile masts than 3G or 4G services.

Beyond building the infrastructure, these companies will also need to assist rural communities and support them as they start to access the improved technology and services arising from it. Wildanet is already working closely with local community groups in Cornwall to support residents accessing the internet for the first time, while both alt-nets are offering career opportunities for locals to train as fibre engineers.

Our strategy is to fund the network winners across a number of different regions – with a view to ultimately create a quasi-national operator. In the meantime, by working across alt-nets, we can amalgamate knowledge and create synergies – such as sharing network tools and helping providers collaborate on government tenders. As the sector develops, there will be further opportunities to invest in ‘edge’ data centre assets, which are smaller data processing facilities located close to the populations they serve, often in rural areas, to improve speed and, hence, customer experiences.

Just 15% of the UK is covered by a gigabit broadband service, compared to 60-80% for other G7 countries. Therefore, we foresee a once-in-a-generation opportunity to invest in the fibre backbone that will power the country’s digital economy over the next half century.

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