The Future of Rural Communities

This report explores the extraordinary potential of the UK's rural communities as engines for growth

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By 2050 many traditional tourist hotspots across Europe have overheated. Though rural areas also face challenges, they have become more attractive travel destinations. Particularly in the - relatively - temperate UK.

Foreword

Dominic Kearns

CEO and Co-Founder of Fibrus

"For too long, rural UK has been seen through a lens of decline, with rural areas portrayed as places left behind, living in the shadow of our cities. That story is outdated. The truth is, rural communities are not relics of the past - they are redefining the future. They are evolving, innovating and leading in ways too many still fail to see.

"At Fibrus, we know what real change looks like. As a driving force in full fibre broadband across rural Northern Ireland and Cumbria, we've seen firsthand how high-quality connectivity can ignite transformation. This isn't just about faster streaming - it's about powering entrepreneurship, connecting communities, and unlocking new opportunities for growth.

"Rural communities deserve the same digital foundations as any city, and Project Stratum[1] has proven that with the right support and investment, these areas can thrive. This report is living proof: rural communities aren't waiting for progress - they are already engines of growth."

Tom Cheesewright

Applied Futurist

"The scale of the opportunity in front of the UK's rural communities is truly striking. They are perhaps one of our most underappreciated resources - not just beautiful but increasingly populous, and packed with assets that our scenarios show could be of rising importance to the country in the years ahead.

"Unlocking this opportunity does require investment, from both the public and private sectors. But with increasing connectivity, more control is put in the hands of communities to be the architects of their own futures. High speed digital channels are foundational to making the most of opportunities in remote work, tourism, energy and automation."

Report author

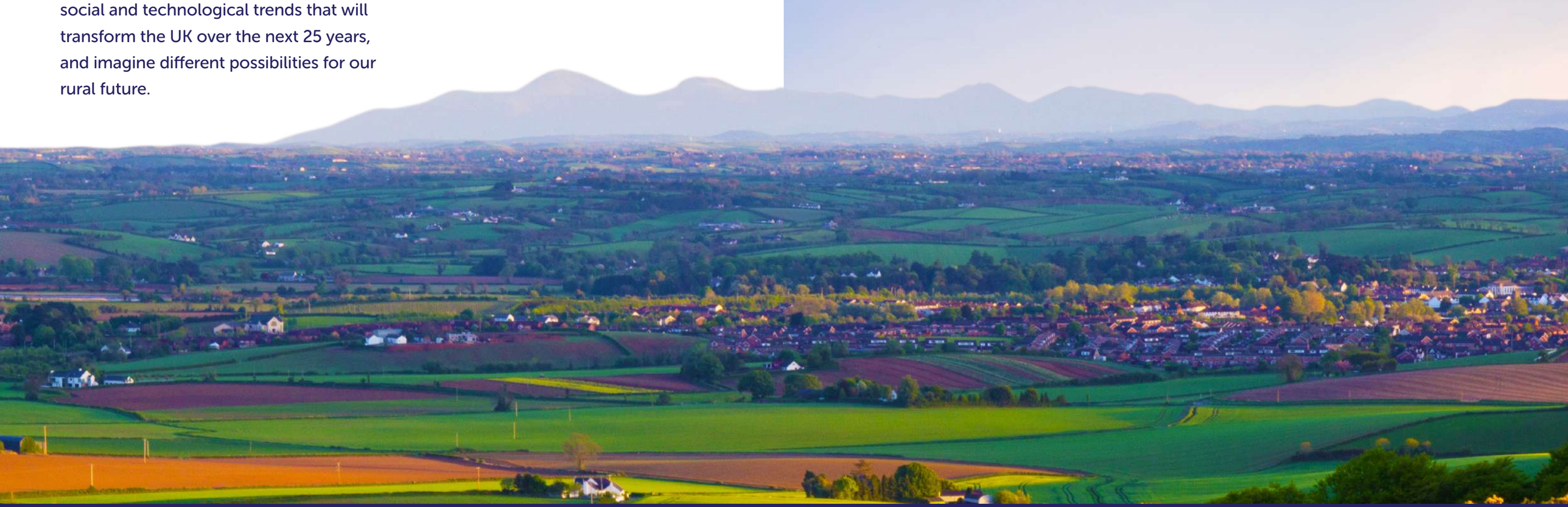
Introduction

Would it surprise you to learn that rural communities are growing, not shrinking? That employment rates are higher in rural areas than urban? That nearly a quarter of all businesses in the UK are in rural locations?

Rural communities face challenges. But those challenges are often seen through comparison with our cities, for so long the heroes of the national story. This report is an attempt to examine the future of rural communities as the hero of their own story. To look at the economic, demographic, environmental, social and technological trends that will transform the UK over the next 25 years, and imagine different possibilities for our rural future.

What we find is incredible potential for economic growth, balancing inequalities and tackling demographic decline. Just like the rest of the nation, the rural UK faces challenges over the years ahead, but also presents incredible potential, across its key industries and assets.

"Nearly a quarter of all businesses in the UK are in rural locations"



Methodology

In order to capture a wide range of possible futures for rural communities, we followed a modified scenario planning approach for this report.

First, we took current forecasts for key trends around demographics, the economy, infrastructure and services in rural areas, and extrapolated out to 2050 using the best data available. Then we stretched this core scenario in three different directions, imagining how the future might look under different circumstances.

The first scenario is focused on a change in the way we work, returning to the pre-pandemic trend - accelerated by COVID - for more remote and flexible work. Counter to the current backlash and drive to the office, remote and hybrid work becomes an expectation, with more flexibility around location and hours. Government doesn't just respond to this trend but supports it, with policy and investment, driving a new flow of workers to the countryside.

The second scenario is predicated on large and rapid investment from both public and private sectors to address the weakness in our energy provision. Rural communities become a focus for investment in new infrastructure and facilities to tackle climate change, shore up energy security and lower electricity prices. This drives lower rural energy prices which in turn support more advanced automation in agriculture, increasing yields and productivity.

The third scenario is based on a particular range of climate forecasts for the next 25 years making the UK a refuge for tourists seeking more temperate climates than traditional hotspots - literally - in southern Europe. Rural and coastal communities in the UK face both the opportunities and the challenges of dramatically increased tourist numbers, that bring an economic boon but also some of the issues currently being faced in Spain and elsewhere with overcrowding.

Each of these three scenarios and the baseline scenario are laid out in more detail over the next few pages.

Baseline scenario: 2050 current projections

By 2050, the UK's rural communities are projected to undergo significant transformations, marked by both growth and profound challenges. This baseline scenario highlights intersecting forces: demographic ageing, climate change, economic restructuring, and technological revolution.

Population

Rural populations in 2050 will be larger but also considerably older[2]. By 2050, one in four adults in the UK will be over 65[3], and in rural areas the proportion will be much higher. Existing government forecasts only run to 2030 but even by then, the most rural areas might have a ratio of 1:2, retirement-age to working-age adults.

The existing ageing profile is amplified by the continuing outflow of young adults for cities[4], while older people tend to move in the opposite direction. This "super-aged" profile will strain rural health and social care systems, creating a paradox where demand rises but the local working-age population shrinks.

Climate

The rural physical environment will be reshaped by climate change, with hotter, drier summers and warmer, wetter winters. This will intensify risks of both drought (England facing a nearly 5 billion litres/day water deficit[5]) and flooding (one in four properties at risk by mid-century[6]).

These pressures necessitate a radical rethinking of land use, creating intense competition between food security, biodiversity, carbon sequestration, and renewable energy needs.

Economy

The rural economy will see its most significant restructuring in a generation. Agriculture is shifting from land-based subsidies to payments for environmental services[7], with incentives for stewardship and technologically accelerated productivity.

Beyond farming, sustainable tourism will continue to grow, with recent years seeing a compound growth rate of over 8% and this is projected to continue into the 2030s[8]. Remote working will relocate some high-skilled jobs to rural areas. This digital transformation, however, risks creating a "two-tier" rural society, deepening the divide between the digitally connected and the excluded.

Infrastructure

Underpinning this future is a critical need for infrastructure renewal. Achieving Net Zero by 2050 requires massive investment in renewable energy grids, retrofitting inefficient housing, and building new water assets like reservoirs. While electric transport addresses decarbonisation, it may not solve rural accessibility challenges without significant investment in shared mobility.

High-quality digital infrastructure is paramount, with ubiquitous broadband connectivity acting as the key enabler for economic and social change. Without universal access, a stark digital divide will determine which communities thrive.

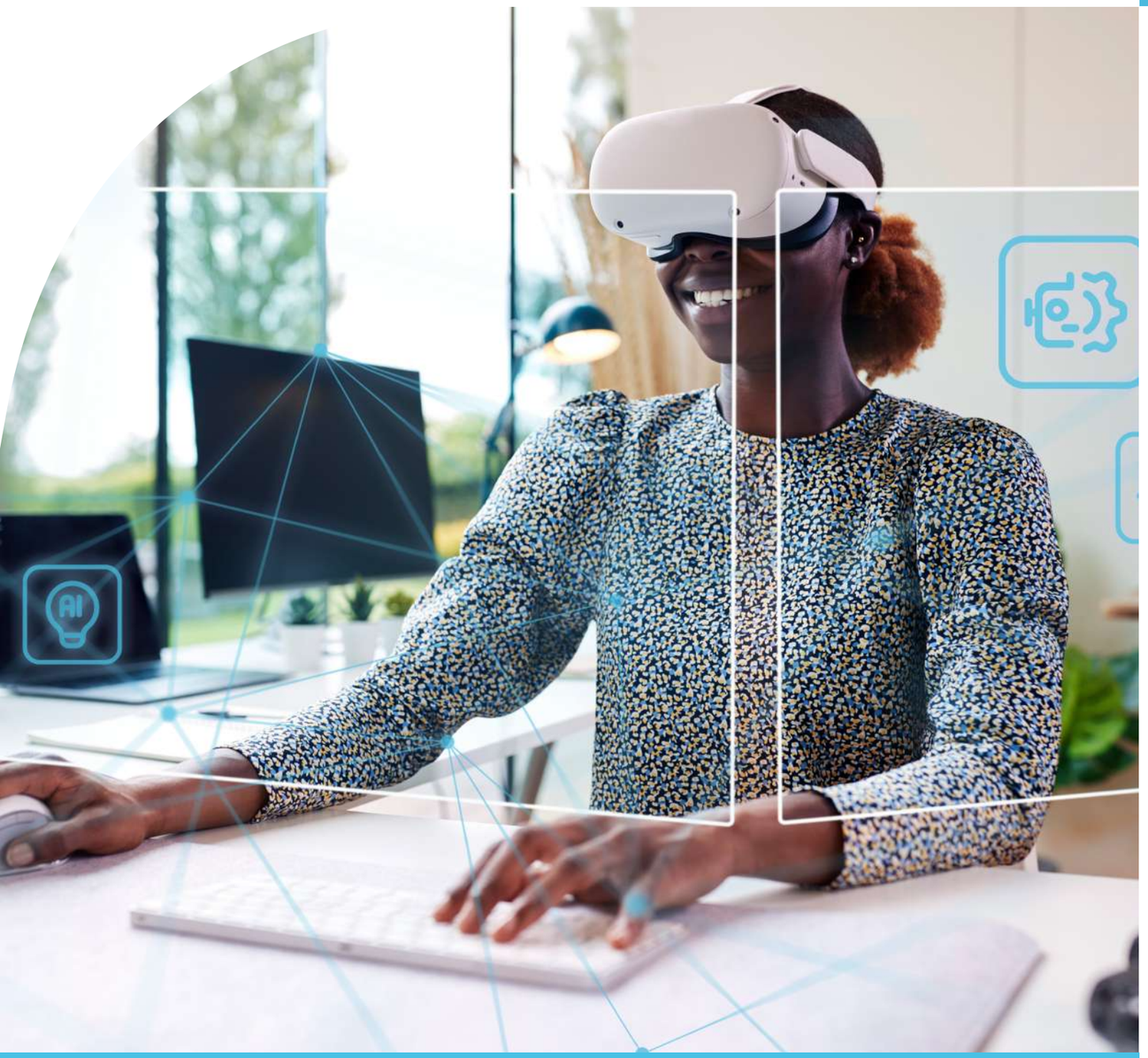
Summary: Rural UK 2050

In summary, as it is today, the rural UK in 2050 will be both dynamic and challenging. New opportunities coexist with new vulnerabilities. The defining challenge will be building multi-faceted resilience to the interconnected environmental, economic, and social challenges.

In the following section we lay out three alternative scenarios that are only slightly shifted from the core, but expose the incredible potential for the rural UK as an engine of growth.

Scenario 1:
Remote return

Rural populations boom as digital tools and new management techniques end the ‘return to office’ mandate.



The current ‘back to the office’ panic is just a blip.

In 25 years we’ve worked out how to balance the needs of companies and managers, with those of all types of workers: those who want to be in the office some of the time, all of the time, or none of the time.

AI, automation and agency

AI plays a major role in this. It provides leaders with better insight into their workforce, analysing real and richer measures of productivity and value than might be superficially obvious. But more fundamentally, it changes the nature of work, stripping away much of the admin and refocusing us on the parts of work that are uniquely human: creativity, collaboration and communication.

Many organisations are smaller, with more automation. But they are also more productive and profitable. And the same automation streamlines the starting of new businesses. Small and micro enterprises are even more dominant as a proportion of the economy, and their owners have even more flexibility in where they choose to live and work. Larger rural centres become key start-up locations for entrepreneurs seeking to balance work and life quality.

A new race for space?

Rural areas don’t see the rapid rush of incomers they did in lockdown, but instead a persistent flow from the late 2020s onwards. Combined with revised planning rules, this sees developers taking up opportunities to sympathetically expand and redevelop rural areas with more housing aimed at a wide variety of tenants and owners, from young to old.

Amenities return and expand as a result, with restored bus links, doctor’s surgeries and reopening shops and pubs. Major infrastructure works are the main delay, with expansions in energy networks and water systems required, as well as schools and surgeries to support the increased population.

Remote return

Metaverse connected

Digital infrastructure plays an enormous role in supporting the expansion, with remote workers leveraging bandwidth to access increasingly rich forms of interaction, including metaverse collaborations and tools: virtual and mixed reality meeting rooms and creative tools that replace the traditional keyboard, mouse and video call.

Growth and challenges

Growth is focused on those areas with access to the greatest natural assets: coastal areas, lakes, and areas of outstanding beauty or hobby locations for walking, climbing or cycling. While the influx of new residents and the retention of young people has the advantage of offsetting the ageing population somewhat, ageing remains an issue, with service industries and agriculture facing some labour shortages - and wealth inequalities amplified.

Key effects of 'Remote return'

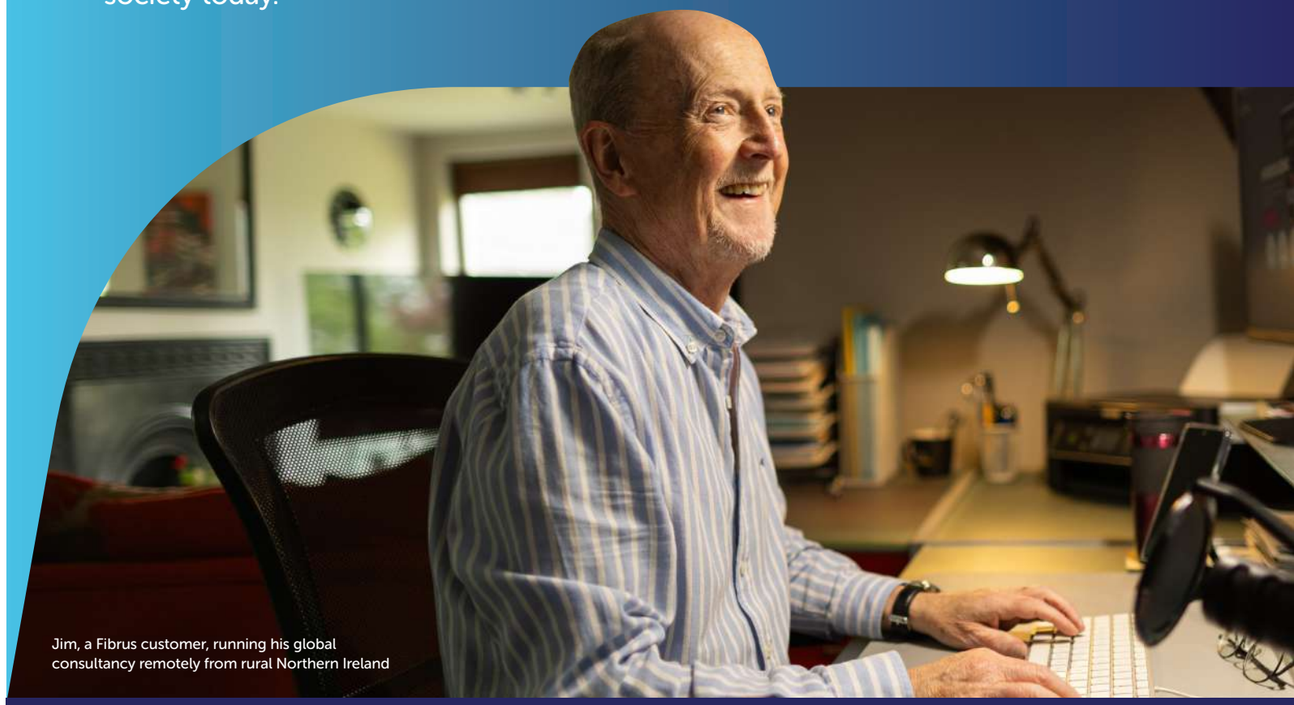
- Rural population growth outpaces urban growth through to 2050, at a higher rate than currently projected with development focused on larger rural centres, and places of natural beauty / places with access to leisure assets.
- Digital infrastructure, AI and new management techniques enable an end to return to office mandates, enabling the shift. The number of people employed in rurally registered businesses increases to almost 20% of the working population[9].
- Start-up founders, many freelancers and full-time employed remote/hybrid workers choose rural lifestyles, as the disadvantages of distance are further diminished.
- Improving rural infrastructure reduces the outflow of young people seeking work and homes, and of older residents seeking better access to amenities. This keeps the ratio of working-age to retirement-age people in rural areas only slightly higher than the national average.
- Key challenges include the ageing rural demographic (offset but not reversed) and rising wealth inequalities.

From the hills to the cloud: How full fibre opened the world to a rural entrepreneur

For global businessman Jim, running his consultancy from rural Northern Ireland wasn't always possible. While Jim embraced rural life, poor internet speeds made remote work almost impossible – until Full Fibre broadband arrived and 'changed everything overnight.'

"Before Fibrus, I was constantly battling unreliable broadband. Going from 1Mb to 500Mb has transformed my business. I recently trained a large US organisation entirely remotely over eight months. Try that on 1Mb! AI is now cutting my admin time, and cloud solutions have boosted productivity and security.

"There's growing pressures to return to offices currently, but remote working offers huge personal and community benefits. But I can see societal pressure beating offices longer term. The contribution that rural businesses, especially SMEs, make to the economy is often overlooked. With the right strategy and support, we can drive national growth, harness new technologies, and ease the urban pressures facing society today."



Jim, a Fibrus customer, running his global consultancy remotely from rural Northern Ireland

Scenario 2:
High-tech harvest

The UK's rural areas become the suppliers of not just our food but our fuel, providing the country with energy, and leveraging robotic technology to increase productivity.

In 25 years, the integration of energy generation and storage with agriculture is seamless and natural. We've moved beyond today's planning disputes with distributed and discreet technologies that turn rural areas into giant generators and energy banks that are invisible to the untrained eye. Farmers leverage their energy assets and ubiquitous broadband connectivity to power automation, increasing productivity and offsetting labour shortages to increase the UK's food security.

Solar future

Solar collection has hit peak performance and while some fields are turned over to generation, their installation is sympathetically styled, providing shelter for livestock which manage grass levels in return. More discreet designs such as terracotta and slate-coloured panels replace ageing roofs on homes and farm buildings, maintaining a traditional look while adding to the energy harvest.

Stored energy

There are large, dedicated energy storage facilities, but the number and scale required is offset by fast-growing levels of domestic storage, and vehicle-to-grid technologies - particularly for farm vehicles with large battery capacities (over 100kWh). When connected to a charger, these can be used for balancing grid demand and then recharged from cheap energy at times of low demand, or from solar[10].

Recycled EV batteries are repackaged into small grid-connected energy storage units that disappear on land the size of a typical farm, but that combined provide very large amounts of grid capacity - as well as additional revenue streams for farms.

Robot farmers

Farmers use the low-cost energy to power rising levels of automation, leveraging both specialist and generalist robots to tackle a variety of tasks. Some aspects of farming are already highly automated. But in 25 years, useful human-scale androids are available for just £20,000 (current equivalent)[11], and their strength, dexterity and robustness, combined with ease of instruction and training, mean they can be put to a variety of uses: picking, sorting, shovelling, lifting. Specialist robots, such as laser weeders, improve yields while reducing chemical use and costs.

High levels of rural connectivity power rapid agricultural innovation, with rich connectivity across farms enabling new smart sensor tech and AI-powered analysis, tracking livestock health, soil conditions, and plant growth. And allowing robot farm assistants to report back in real time and even be remotely piloted via a pair of smart glasses if required, to address complex situations. The UK extends its position as a leader in agri-tech, driving a wave of new rural start-ups and growth businesses.

High-tech harvest

From field to future: Littlebridge Farm, Northern Ireland

On the outskirts of Coagh, County Tyrone, Littlebridge Farm is a family-run dairy farm managed by Caleb Howard. Alongside producing milk, Caleb also runs a thriving farm shop selling homegrown beef, pork, and potatoes - where they take pride in local, sustainable agriculture and their love of produce. The days start early and stay busy at Littlebridge - but increasingly, technology and connectivity play a major role in the day-to-day operations on the farm.

"We work with robotics on a daily basis, so we need a fast flow of broadband to keep things moving. We've got a robotic milking machine, and several other devices that utilise robotics to make processes more efficient around the farm.

"Technology on the farm isn't going to slow down. As time moves on, so does the way in which we do things here, with new technology and robotics set to completely transform farming as we know it in the coming years.

"As we integrate further technologies into our operations, having fast reliable broadband is a complete non-negotiable for us. It has transformed how we operate, and it will continue to play a vital role in our farm and business in the future."

Caleb, a Fibrus Customer, using herd management technology to monitor the feeding patterns, milking output, and overall health of his Jersey cattle

The new Silicon Valley

The role of the farmer continues to evolve, becoming an increasingly high-tech role as well as being a highly skilled one. Agricultural education schemes trend progressively towards more technology skills with greater and greater crossover with science and digital learning. A growing number of start-ups emerge from these institutions, at the intersection of bioscience, robotics, energy and agriculture.

Climate challenge

Challenges remain, particularly in the adaptation to climate change. Water use, re-use and preservation is a source of tension between food producers and other consumers and extreme weather events drive unpredictability in harvests. But the broad picture is positive for the rural community and the UK more widely, with greater food and energy security.

Key effects of 'High-tech harvest'

- Nationally, 100% of supply comes from renewable sources.
- The rural UK becomes a key component of national energy strategy, generating and storing renewable energy through distributed solar and small battery installations.
- Energy wealth is used to power advanced automation, particularly in agriculture, where both specialist and general-purpose robots increase productivity and yields, and lower the chemical load.
- Agricultural technologies advance rapidly, leveraging rich rural connectivity, leading to new rural start-ups and growth enterprises.
- Challenges remain around the adaptation to climate change, with wide fluctuations in harvests and competition for water resources.

Scenario 3: Destination UK

By 2050 many traditional tourist hotspots across Europe have overheated. With temperatures rising and water shortages becoming more acute, cities particularly struggle with summer temperatures that have risen by degrees.

Though rural areas also face challenges, with extreme weather events and rising sea levels in coastal areas, they have become more attractive travel destinations, particularly in the (relatively) temperate UK.

Rural - and virtual - tourism

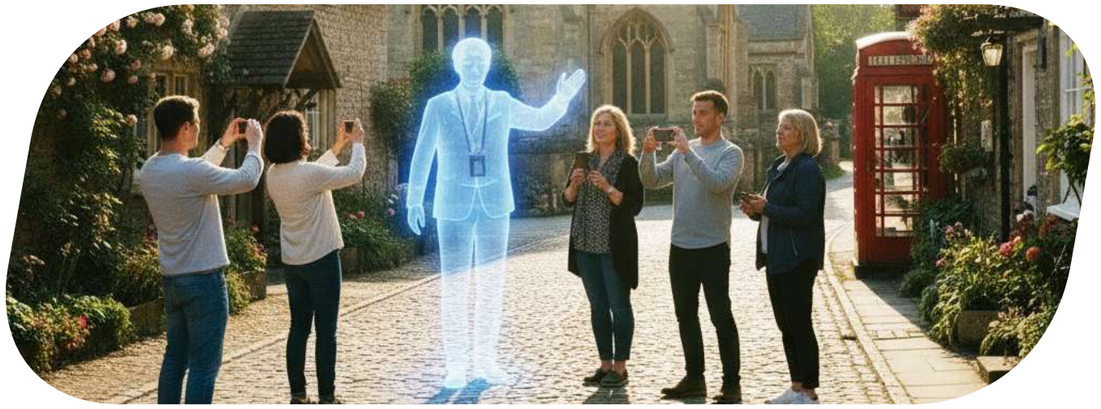
UK tourism numbers continue their rising pattern in the face of climate change, with a rising proportion of visitors staying outside of London and experiencing the rest of the UK, particularly rural and coastal areas.

Travel has been transformed by technology by the 2050s. AI and mixed reality devices combined have stripped much of the remaining friction from going abroad, offering navigation, real-time translation, and even 3D avatar guides if you want them. But people also appreciate the opportunity to escape from technology into nature, if not too far from their devices.

Expanding assets

Critically, people also want to escape from crowds when they visit the countryside, so major expansion of rural tourism facilities is required to accommodate demand. Digital enablement is critical, especially in the age of AI and avatars.

Alongside new accommodation, road and rail, even larger projects become financially viable: the renovation and flood protection of smaller coastal towns, and the creation of large artificial lakes, already common in Germany and other parts of Europe. These lakes provide a destination for visitors, an inland beach around which can be built accommodation and leisure facilities, but also an asset that can be used to balance water supply and demand.



Destination UK

Cultural boon

The expansion creates new opportunities for businesses both large and small, leveraging the UK's natural assets and traditions. Food producers, tour operators, experience venues all expand, making tourism a larger percentage of the national economy and employment profile - particularly in rural areas[12]. Visitors experiencing the UK's less well-known regional food specialties take them home with them, becoming a primary marketing asset for the UK's food industry and increasing international appetites for UK specialities.

Space and resources

The UK faces the same tensions as other tourist hotspots, with competition for space and resources between visitors and local people. But the economic benefit is a net positive, driving rural productivity levels closer to cities and creating new opportunities that keep young people in the area.

Tourism trends towards the sustainable, leading to more small developments that are well-integrated with the local community rather than larger sites. Local ownership of properties keeps profits in the rural economy.

Key effects of 'Destination UK'

- Tourism becomes a much larger part of the UK economy, rising to 3.6% of economic output, with a rising proportion of both international and domestic travellers choosing to stay outside London.
- Around 60m international visitors come to the UK each year[13].
- Virtual tour guides and real-time AI translation strips the friction from travel.
- Supporting the influx requires and drives new infrastructure investment: road and rail but also new amenities such as artificial lakes.
- Visitors become a primary marketing asset for the UK food industry, driving international appreciation for UK specialities.

Conclusions

There are many misconceptions about the rural UK today. Its population, its economic strength, its potential. Fast forward 25 years and if we don't actively correct those misconceptions, we risk losing out on an enormous opportunity to create an engine of growth to balance the biggest cities.

The UK's rural areas have the potential to help us to address some of the nation's biggest challenges. And in doing so, power prosperity for rural populations.

None of the scenarios above are outlandish or implausible. In fact, with some investment all three could form part of a single, powerful narrative for future rural growth. Achieving this potential does require investment, but some of that investment - for example in connectivity - is already taking place.

Many would be surprised at the extent to which the UK's rural communities are already engines of growth. Even more would be surprised at their potential by 2050.

With this report we hope we can inform and educate, show people that potential in order to increase the chance of these positive futures becoming reality.

References

1: Project Stratum, which was awarded to Fibrus in 2020 and funded by the UK Government, Department for Economy and Department of Agriculture Environment and Rural Affairs, was successfully completed in June 2025. The project delivered connectivity to 81,000 homes and businesses in Northern Ireland, changing the lives of those in rural communities and offering them the same opportunities as their urban counterparts.

2: https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationprojections/bulletins/subnationalpopulationprojectionsforengland/2022based

3: https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/ageing/articles/livinglongerandoldagedependencywhatdoesthefuturehold/2019-06-24

4: https://lordslibrary.parliament.uk/rural-communities-issues-and-support/

5: https://www.gov.uk/government/news/england-faces-5-billion-litre-public-water-shortage-by-2055-without-urgent-action

6: https://www.bbc.co.uk/news/articles/c99x4599gr7o

7: https://farming.campaign.gov.uk/

8: https://www.futuremarketinsights.com/reports/uk-ecotourism-market

9: In 2022/23 it was just 14% - https://lordslibrary.parliament.uk/the-rural-economy. Number based on continuation of post-2020 trends of faster growth of rural areas combined with lower outflow of young workers.

10: Based on a 100kWh battery, which is probably conservative, just the ~10,000 new farm vehicles sold each year in the UK in 2025, if electric, would account for over one gigawatt hour (GWh) of storage capacity. Assuming an average lifespan of 10 years, farm vehicles alone might account for 10-20GWh of storage capacity by 2050. Exact targets for our requirements have not been set, but National Grid's most optimistic energy transition scenario only suggests 81 GWh of Vehicle to Grid (V2G) capacity in total by 2050.

11: Today a useful, human-scale android with appropriate levels of strength and AI would cost upwards of £100,000 before training, programming and maintenance costs.

12: Tourism currently accounts for about 1.2 million jobs and 2.4% of UK economic output in 2025: https://researchbriefings.files.parliament.uk/documents/SN06022/SN06022.pdf

13: Up from 42.5m in 2024. See 11 for reference.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