cellnex
driving telecom connectivity

NATIONAL POLICY

DELIVERING ULTRA FAST BROADBAND MOBILE CONNECTIVITY

Background

1. Telecommunications is a public utility that was provided by the Post Office until the decision was taken in the early 1980's to privatise this service. This was achieved through the Telecommunications Act 1984 (the 1984 Act) and it was under Section 7 that the original mobile network operators (MNOs) were granted licenses. The Communications Act 2003 (the 2003 Act) ended the licensing regime established by the 1984 Act, but the operators retained their special status as Electronic Communications Code Network Operators (Code Operators, previously Telecommunications Code Systems Operators). The 2003 Act widened the opportunity for operators to become Code Operators, a key criteria being the public benefit of the network provided.

2. Although the MNOs are private companies, they all therefore provide a public service and one which is recognised as being essential to a modern economy. Setting aside the large contribution made by the electronic communications industry to the economy through direct employment and the sale of products and services, the local benefits will be varied and considerable. In addition, as the technology continues to improve, and the range of services become more varied and innovative, the benefits will also expand at a fast pace. A connected and modern smart phone is now able to access thousands of applications, which means that it is almost impossible to now quantify or specify all the potential benefits.

Growth of Mobile Connectivity

3. Since the first mobile phone call was made in the UK in 1985, the mobile industry has delivered huge benefits to consumers and the wider UK economy. New mobile technologies - or generations - have been introduced roughly every 10 years, each offering improved services compared with previous generations. However, the existing 4G network rollout has been relatively rapid and MNOs are now deploying 5G which has meant that the timescales between mobile technologies has now reduced even further:

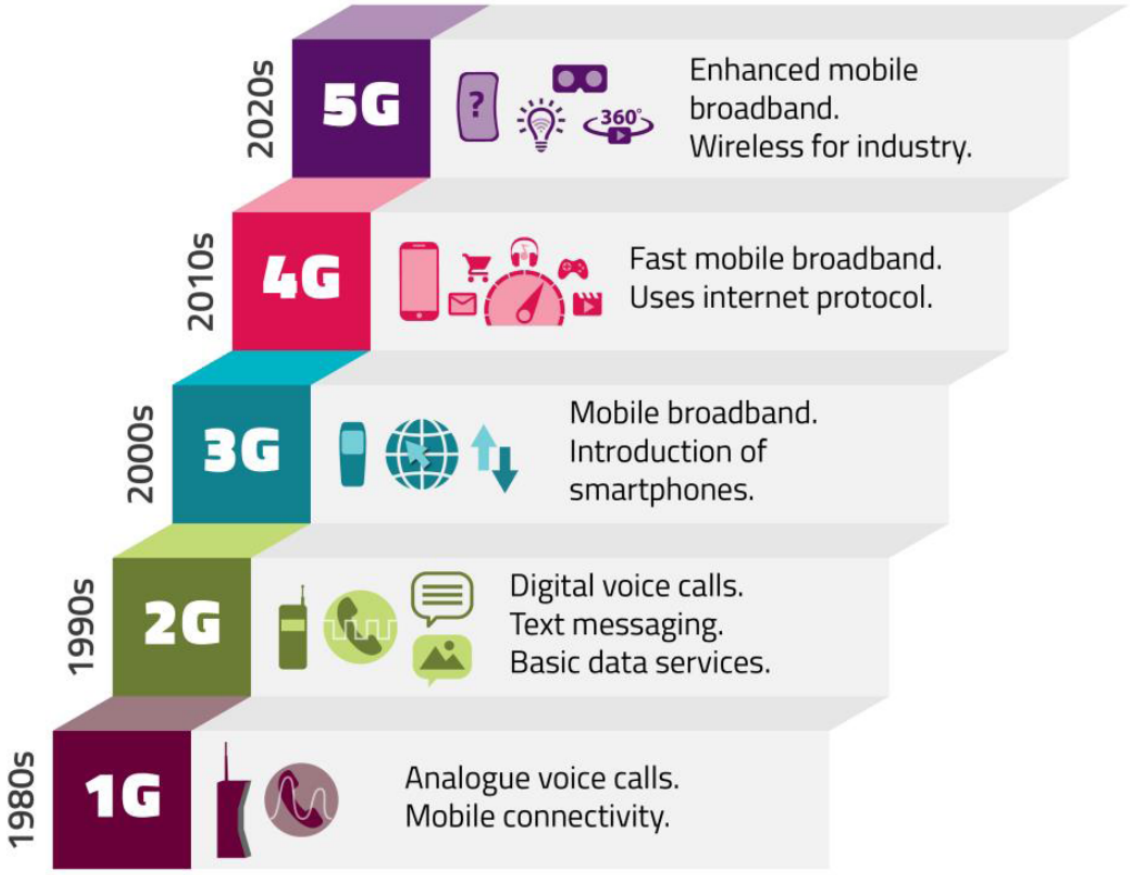
- 1G: the first generation of ‘cellular’ mobile phones, which used analogue radio transmission and supported voice calls;

- 2G: the second generation of mobiles, which used digital transmission and allowed for digital phone calls and messaging;

- 3G: the third generation of mobile communications enabled faster data services than those available on 2G networks, which led to the first consumer friendly mobile broadband internet experience for users; and

- 4G: the fourth generation of mobile communications is a more data-oriented network than its predecessors and is the first all-Internet Protocols mobile communications system. The main advantage of 4G services compared with previous generations are that they offer faster download speeds and quicker response times (latency).

- 5G: this next generation of mobile connectivity will deliver a step change of ultrafast, ultra-low latency, reliable, mobile connectivity, that is able to support ever larger data requirements, as well as wide-ranging new applications including machine to machine applications - intelligent machines that require no human input (e.g. advanced manufacturing). 5G will deliver these flexible networks by making use of multiple bands of spectrum.



Source: Figure 2 from Ofcom's "Enabling 5G in the UK" (March 2018)

4. New generations of mobile connectivity reflect the insatiable public demand for mobile connectivity across the UK. They are supported by Government due to the significant economic and social benefits. There are many reports highlighting the significant growth and benefits of mobile connectivity. More recently, Ofcom's Communications Market Report August 2019 and Connected Nations Report Spring 2019, together with Deloitte's Global Mobile Consumer Survey 2018 advise:

- ***Financial contribution*** - the UK telecoms sector continues to make an important contribution to the overall economy, generating £33.8bn in operator-reported revenue in 2018. The Gross Value Added (GVA) benefits of 5G will be multiples of this. There are around 92.5 million active mobile subscriptions at the end of 2018, completely outstripping fixed phone lines.

- ***Ubiquitous use*** - Smartphones have become universal in their use, growing from 52% in 2012 to 87% in 2018. Smartphone penetration has seen growth across all age groups and the 55-75 category has seen the most growth increasing from 40% in 2013 to 77% in 2018. Smartphones are the most frequently used devices in the UK: 95% of smartphones owners aged 16-75 used their device in the last day and so are simply now a key part of modern life.

- ***Demand*** – The average mobile data consumption has increased rapidly in 2018, with the average monthly use per mobile data connection increasing by 25% to 2.9GB. This will continue to grow, not just through smartphone use and new "apps", but the 5G network will facilitate a whole range of data intensive uses like autonomous vehicles, remote reporting, smart medical and other public service functions.

5. The financial contribution to the UK economy is significant. In May 2018, the Financial Times article "*UK digital technology sector outpacing wider economy"* explained that the digital tech sector was worth £184bn to the UK economy in 2017, up from £170bn in 2016. This has significantly increased on those figures within the UK Government's Information Economy Strategy (June 2013), that estimated that the digital sector alone contributed around £105 billion in GVA to the UK in 2011.

6. The Department for Culture, Media & Sport (DCMS) indicate in its Sectors Economic Estimates August 2017, that the GVA contribution of telecoms sector represented 1.8% of the total UK GVA in 2017, so a significant contributor to the UK Economy and having grown 31% over the period 2010 - 2017. The roll-out of 4G in the UK has been estimated to deliver £75 billion of additional GDP over ten years (http://www.ibtimes.co.uk/4g-everything-everywhere-75bn-lte-economy-334922). New research from Barclays Corporate Banking (April 2019) suggests that 5G could supercharge the UK economy by up to £15.7 billion per year by 2025.

7. Together with these significant economic benefits of advanced mobile connectivity, most communities and local authorities will now understand the

other principal benefits of mobile connectivity, which can be categorised under sub-headings, with examples (which overlap to some extent) as follows:

Local and national competitiveness

- Central and local government are harnessing applications and on-line services to help businesses as well as communities – for example, DEFRA now requires a variety of forms to be completed on line, rather than in written form.
- Mobile communications, especially high speeds can help extend business opportunities into peripheral areas, both directly and indirectly.
- An example of a direct benefit would be a business reliant on mobile communications being able to establish within an area, so creating local employment opportunities.
- Indirect-benefits, might include visitors to the local area being able to search and make reservations or bookings at local restaurants or hotels, or people selecting an area to visit over another because of the availability of services
- Local tradesmen and others who provide services such as doctors and vets can provide a more responsive and flexible service, which can save costs.

Improving Social Well - Being

- Mobile communications can help social well – being by simply ending or reducing a sense of isolation.
- Mobile communications can bring about far greater personal convenience and security, for example, teenagers can keep in parental contact when out in the evening.
- Mobile communications can provide much greater freedom to carers, who can remain in contact in case of emergency.

- Mobile communications are required to enable people to remain connected and to access social networking sites. For young people in particular this is important so that they can feel included amongst their peer group.

- Mobile communications can access a range of applications to benefit people's lifestyles and interests.

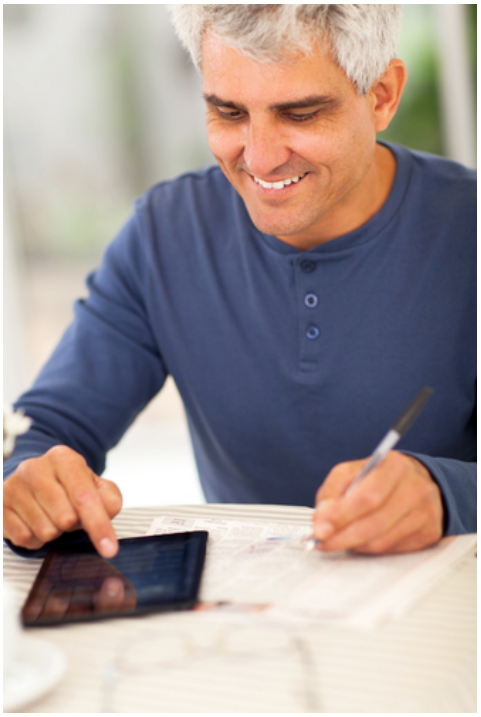
- Mobile communications can help parents interact with children far away, for example, a divorced father can play a game on line with a child many miles away.

- Reliable mobile connectivity gives people the choice to elect not to have a fixed line. At a time when nearly everyone has a mobile, a low income household with no or little mobile connectivity may still have to pay for both. Better mobile connectivity and availability can mean that a household can save on the fixed line costs, which to them would be an appreciable saving.

Encouraging Sustainable Lifestyles

- Mobile phones can help minimise unnecessary journeys, so increasing productivity and reducing travel demands.

- Mobile phones can help facilitate modern forms of working, including greater homeworking, particularly beneficial to more rural communities. This can bring about an improved balance between home and working life. At the same time, it can help minimise private car movements and so help reduce peak period congestion and pollution. This is a particularly important benefit when transport policy to reduce travel and CO^2 emissions seems to be failing.

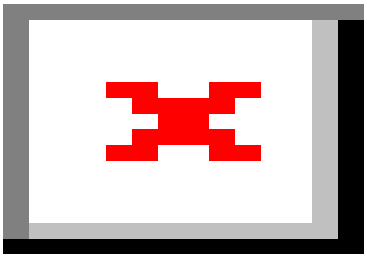


Improving Health and Safety

- Most 999 calls in the UK, including requests for Coastguard assistance and Mountain Rescue are now made using mobile phones.

- Last year on an average day in Great Britain 5 people were killed on our roads. A far greater number are saved from fatal or permanent injury through prompt paramedical assistance in the critical early period following an accident. This is made possible by 999 calls placed almost immediately following an accident. The current level of fatalities is almost

half what is was at the Millennium and improved mobile connectivity is likely to be a factor in this.



- Ambulances responding to heart attack victims will often have mobile connected ECG machines that can send real time data back to specialist hospital units, so they can advise paramedics on the scene, direct the victim to the most appropriate unit and enable pre-operation preparations to commence on the victim and at the hospital.

- There are an increasing range of health and well-being applications, from fitness bands to heart and other monitoring such as alerts for diabetics and those with kidney problems to take medication or seek help. These are increasing with 4G services and with 5G are anticipated to be more linked with primary health care records and services.

- Mobile phones can be used to summons assistance from the breakdown services in the secure environment of a locked car. This is particularly important to the vulnerable.

Delivering the UK Digital Strategy

8. From the above, it is clear why the Digital Economy in all its forms, including fixed and mobile communications networks, is a significant priority for the UK and Devolved Governments and reflected in their various 'Digital Strategies'.

9. In terms of mobile connectivity, the UK Government is focused on supporting mobile connectivity and next generation technologies within a more facilitating legislative framework. So, this has seen, for example, the introduction of the new Electronic Communications Code allowing more economic access to sites, further relaxation of permitted development rights and greater protection to existing network infrastructure including digital connectivity forming part of the UK's Critical National Infrastructure.

10. All four MNOs have now acquired, through Government spectrum auctions, frequencies that will be used to allow capacity improvements to existing networks and those suitable for deploying. Other spectrum, such as that to be released by clearing terrestrial television from the 700MHz spectrum will also allow 5G, mostly likely geared more towards low capacity wide area coverage, with a particular focus on rural connectivity. The 26GHz and above radio spectrum is likely to be used, in the future, for very dense and high capacity 5G coverage in towns and cities.

11. All of this means that we can expect to see significant Government emphasis and MNO delivery priorities towards:

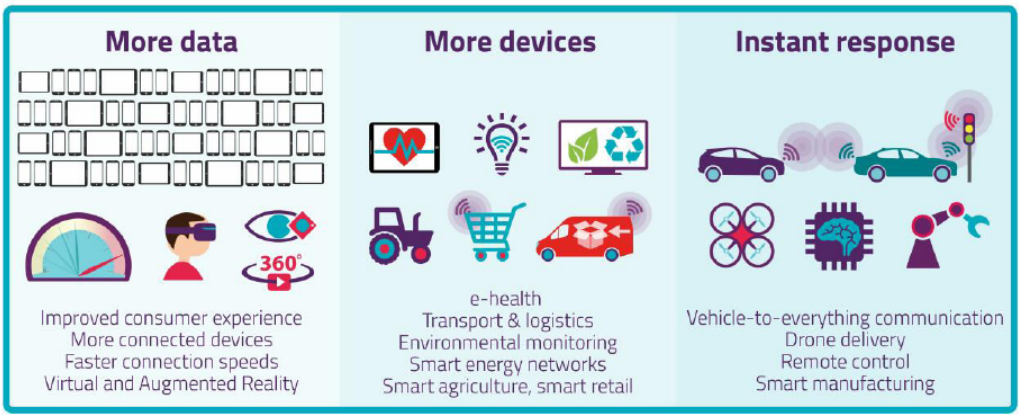
- Improvements, resilience (power / security) and additional capacity to the existing mobile networks – particularly 4G

- Bridging the 'digital divide' between those areas that have mobile connectivity (and choice of service) and those with poor, partial or even non-existent (not spot) coverage. This likely to be focused on rural areas and more peripheral locations of Scotland and Wales

- Deploying next generation 5G - initially built around existing MNO mobile base stations, although new sites will be needed for a number of reasons including resilience and capacity. Dense urban coverage and additional capacity is likely to require new 'small cell' radio technology and use of fixed line fibre networks.

12. 5G, which is now being deployed, is a huge step change and the Government recognises that the successful and early deployment of full 5G networks will require a major change in mobile infrastructure investment and the need for further evolution of regulatory frameworks, including support of the town planning system.

13. Ofcom's "Enabling 5G in the UK" (March 2018) advises that Ofcom shares the Government's ambition for the UK to become a world leader in 5G. Figure 1 of Ofcom's document below explains some of the expected benefits of 5G:



Source: Figure 1 Ofcom Enabling 5G in the UK (March 2018)

14. The Department for Digital, Culture, Media & Sport (DCMS) '*Future Telecoms Infrastructure Review'* states that the Government has set an ambitious target that the majority of the population will be covered by a 5G signal by 2027.

15. 5G is expected to enable both an evolution of existing mobile services and potentially revolutionary new services. The Government advises that 5G is the first generation of mobile technology that has been designed to support multiple applications, from mobile broadband and entertainment services, to industrial applications such as robotics and logistics. These applications will be delivered through different combinations of the three broad capabilities of 5G:

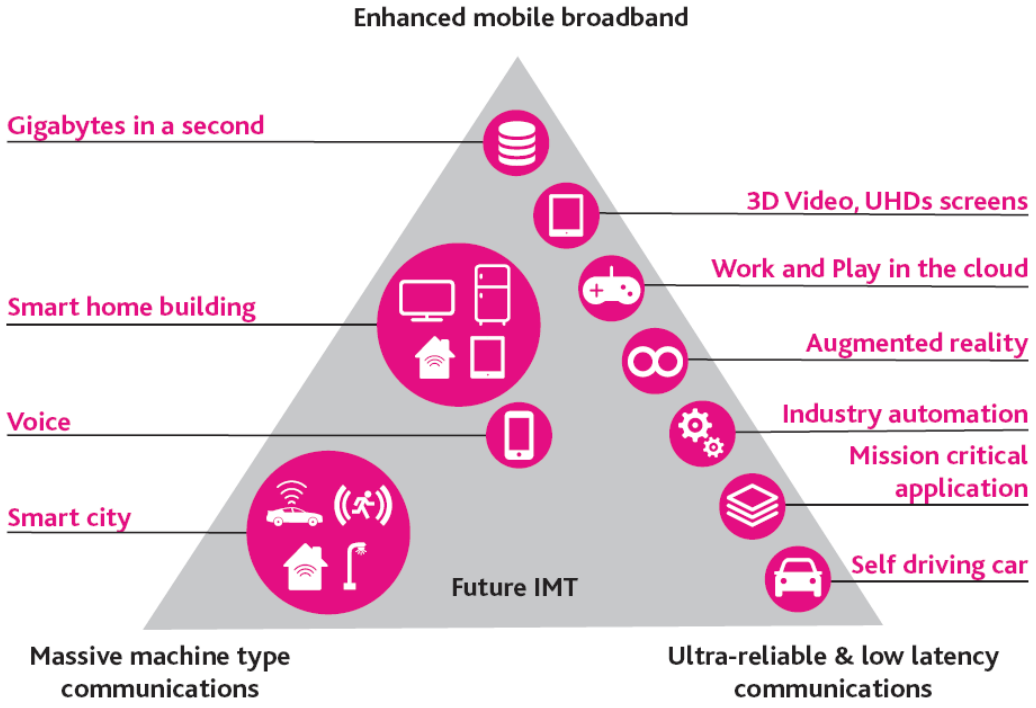
- improved mobile broadband (wireless broadband)

- considerable 'machine-type communications', with the amount of devices able to be connected many multiples of 4G

- ultra-reliable, low latency communications (near real-time communications with 99.999% reliability) essential for certain applications of 5G.

16. The diagram below shows the likely capabilities of 5G, allowing sustainable smart cities and towns with self-driving vehicles on smart motorways, through to the use of smart services and devices, which will transform industrial production, the medical sector and bring efficiencies and reliability.

Figure 4: Capabilities of 5G



Source: International Telecommunications Union (2015), 'IMT Vision – Framework and overall objectives of the future development of IMT for 2020 and beyond'

Source: DCMS 'Future Telecoms Infrastructure Review'

17. Developing on this, the Government expects to see a more converged telecoms sector. Fixed fibre networks and 5G are complementary technologies. In some places, 5G may provide a more cost-effective way of providing ultra-fast connectivity to homes and businesses.

18. In turn, over the next few years, the UK can expect some major new mobile deployments and associated infrastructure based around:

- **Upgrades** - equipment upgrades and increases at existing mobile communication sites, especially to facilitate 5G which has significantly different operational, siting and design considerations and implications

- **New Sites** - new sites within rural areas, supporting a better "rural grid" to meet greater coverage obligations on MNOs as part of tighter and more focused spectrum auctions (including 5G). Additional focus on transport routes, road and rail corridors to allow seamless connectivity.

- **Special Programmes** - new sites, likely focused towards rural and peripheral areas, as part of highly focused public intervention programmes by Governments

- **Small Cell network solutions** – delivering the capacity mobile operators and building owners need to meet rising demand in a variety of urban areas, both indoor and outdoor. These are likely to be based around superfast 5G apparatus installed onto street furniture and the sides of buildings

- **In building Solutions**, particularly to areas of high footfall and use like office buildings, airports and public stadiums

- **Distributed Antenna System (DAS)** - a network of antennas that can be installed throughout a building or outdoor area to enhance mobile coverage for the benefit of users inside and nearby

Support from the Planning System

19. The improvement of existing mobile networks and the delivery of 5G (and future generations of connectivity) requires a supportive legislative and policy framework, including the UK town planning systems.

20. National policy of all Governments, reflected in the National Planning Policy Framework (NPPF) in England, National Planning Framework 4 (NPF4) in Scotland, Planning Policy Wales and the Strategic Planning Policy Statement for Northern Ireland, is to support the provision of advanced mobile connectivity

to help underpin and sustain national, regional and local economies. Mobile connectivity has become akin to the "fourth utility", with commensurately high public reliance and expectation of an ubiquitous service. Within **Appendix 1** we set out the main Government policy and objectives across the UK to support mobile connectivity.

21. What is wholly consistent within this overarching national planning policy support towards better connectivity, is that local planning authorities should not challenge whether a particular service is needed, but only the site-specific matters and justification considered against local policy and guidance. However, local planning authorities should recognise that without the deployment of next generation mobile connectivity like 5G, it is unlikely that the local planning authority will be able to meet other key policy objectives such as building sustainable communities, attracting new inward investment and delivering smart services.

22. It is very evident that the UK town planning systems have a major responsibility in helping to deliver these network changes and improvements in the public interest. The supportive national policy framework will also have to be reflected at local level through an appropriate policy framework that can be translated into balanced and positive development management decisions. This will require meaningful engagement with the industry and as well as effective decision making by local planning authorities. It will inevitably require proper balancing between operational and environmental considerations, particularly in the most sensitive of locations (like protected areas) where rural communities exist and aspire to have similar levels of mobile connectivity comparable to other urban areas of the UK. Although radio signals are invisible, the systems cannot operate without the necessary infrastructure system, which is no different from other forms of public communications infrastructure. For example, a railway network very obviously requires tracks, stations and parking facilities, whereas a mobile network requires a series of base stations, with communication masts, radio equipment housing and other associated development.

Appendix 1: Key National Policy Context

The following presents key strategic and planning policy of UK Government and Devolved Governments, applicable to the consideration of better mobile connectivity and which form a ***material planning consideration***.

MOBILE CONNECTIVITY	
Publication	**Key Objectives**
EU	
EU Regulatory Framework for Electronic Communications **(Commission of the European Union, 2009)**	• The Regulatory Framework for Electronic Communications providing a reform package for strengthening the European electronic communications market including mobile connectivity
Directive of the European Parliament and of the Council **establishing the European Electronic Communications Code (Recast) COM/2016/0590**	• The European Commission proposed a new European Electronic Communications Code to reflect changes in the market, simplifying the process of investing in new top-quality infrastructures both locally and across national borders.
UK WIDE	
DCMS Digital Britain June 2009	• To support the UK Digital Economy in all its forms, including moving away from GSM coverage to next generation mobile technologies
Ofcom Mobile Data Strategy 2016	• Identifies a need for a long-term strategy to address the increasing use of data by mobile devices such as smartphones, tablets and laptops • Accelerate availability of the 700 MHz band and increase the amount of spectrum available to mobile • Announced initiatives which will help improve reach, cost and availability of fibre and copper and help improve backhaul
UK Digital Strategy 2017 - Connectivity - building world-class digital infrastructure for the UK (March 2017)	• World-class digital connectivity is increasingly vital for businesses in the UK • The UK's digital infrastructure must be able to support this rapid increase in traffic, providing coverage with sufficient capacity to ensure data can flow at the volume, speed and reliability required to meet the demands of modern life

	• CBI survey, 81% of firms said that they see more reliable mobile connectivity as essential • 5G is the next generation of mobile connectivity – wants to see the UK take a leading role in the development and roll-out of 5G.
DCMS / HM Treasury - Next Generation Mobile Technologies: A 5G Strategy for the UK – March 2017	• States that digital connectivity was once a nice to have, perhaps even a luxury - it is now essential • UK Government has a clear ambition for the UK to be a global leader in the next generation of mobile technology – 5G • 5G will support transport and logistics; financial services; health and social care; retail; digital creativity and information services; and production, manufacturing and robotics • Lower latency (i.e. quicker reaction times) expected to be a feature of 5G networks could make it possible to support the large-scale use of driverless vehicles for the first time. • In connectivity "hot-spots", additional capacity will likely be provided by hundreds of thousands of small cell radios with short-range, high speed connectivity that support the existing network. • For technological progress in the mobile market this will require a flexible regulatory framework that keeps pace with developments. • Local areas have a critical role to play in facilitating the deployment of mobile telecommunications infrastructure and are already doing so in many areas. • Government wishes for local areas to develop broader plans to deliver local mobile connectivity. • Flexible and fit for purpose planning regulations will be required to support the deployment of 5G networks.
DCMS Mobile Infrastructure Project Impact and Benefits Report	• 75 mobile masts to 7,199 premises which previously had no mobile signal • Government evaluation showed that communities greatly appreciate the improved mobile connectivity and that it brings a variety of benefits to those communities. • MIP helped to reduce the digital divide and add public value, • MIP confirmed the need for Government to work more closely with mobile operators to ensure they are able to roll out their networks into rural areas. • Challenges associated with mast site acquisition, experienced during MIP, have helped bring about new legislation to relax the planning regime.
Digital Economy Act 2017	• Substantially different from, and shorter than, the Digital Economy Act 2010, whose provisions largely ended up not being passed into law.

	• Introduced a Universal Service Obligation which allows users to request broadband speeds of at least 10 Mbps. The obligation is to be introduced by 2020, and Ofcom are empowered to subsequently increase the minimum broadband speed requirement. Although largely directed towards fixed line, mobile broadband connectivity will form part of the overall delivery strategy • Updates the Electronic Communications Code in order to make it easier for electronic companies, like MNOs, to erect and extend mobile masts to improve mobile connectivity
Electronic Communications Code 2017	• Updated to make it easier for network operators to install and maintain apparatus such as phone masts, exchanges and cabinets on public and private land
Ofcom – Enabling 5G in the UK – March 2018	• Ofcom has a role to play alongside Government and industry in enabling the development and rollout of 5G, and unlocking its benefits • Ofcom shares the Government's ambition for the UK to become a world leader in 5G • To release different types of spectrum bands for 5G • Work with Government and policy-makers to ensure access to sites is not a barrier to 5G • Ensuring access to appropriate connectivity between 5G base stations and the core network • Sets out the expected uses of 5G • The deployment of 5G is likely to mean that consumers benefit from more choice and innovation in communications services • The services enabled by 5G may change the way consumers behave, for example including the degree of competition and potential substitution between fixed and mobile broadband.
Deloitte (for DCMS) - the Impacts of mobile broadband and 5G – June 2018	• Commissioned by the DCMS to take a focused review on the economic and social impacts of mobile broadband and potential impacts of 5G
DCMS – Future Telecoms Infrastructure Review – July 2018	• UK to have high quality mobile connectivity where people live, work and travel • In the longer-term, the Government expects to see a more converged telecoms sector – especially with technology synergies between 5G and fixed networks • Wide-scale deployment of next generation technologies like 5G and full fibre will be key to the UK remaining globally competitive

	• Wide-scale deployment of these next generation technologies will underpin the UK's modern Industrial Strategy. • Want to be a world-leader in 5G, with the majority of the population covered by 5G networks by 2027. • Government will create a supportive market and policy condition [to support next generation technologies]. • Government recognises the need to keep planning regulation under review and to listen to suggestions from industry for how new technology is best supported in the planning regime.
House of Commons Library Briefing Paper – 5G – February 2019	• Sets out a detailed briefing note on 5G, its benefits and Government policy • Government set a target that the majority of the population will be covered by a 5G signal by 2027.
ENGLAND	
National Planning Policy Framework – revised February 2019	• States that advanced, high quality communications infrastructure is essential for sustainable economic growth. • Planning policies and decisions should support the expansion of electronic communications networks, including next generation mobile technology (such as 5G) • Policies should set out how high-quality digital infrastructure, providing access to services from a range of providers, is expected to be delivered and upgraded over time • The number of radio and electronic communications masts, and the sites for such installations, should be kept to a minimum consistent with the needs of consumers, the efficient operation of the network and providing reasonable capacity for future expansion. • Use of existing masts, buildings and other structures for new electronic communications capability (including wireless) should be encouraged. • Where new sites are required, equipment should be sympathetically designed and camouflaged where appropriate
SCOTLAND	
Infrastructure Investment Plan 2011	• Sets out why Scottish Government needs to invest, how they will invest and what strategic, large scale

	investments they intend to take forward within each sector over the next 10 to 20 years. • Moving Scotland to a position where it is keeping pace with international comparators • Plan will consider the current connectivity infrastructure in Scotland, including information on the mix of potential technologies.
Scotland's Digital Future – A Strategy for Scotland - 2011	• Presents a strategic vision to achieve the digital ambitions of the Scottish Government including better mobile connectivity
Scotland's Digital Future – Infrastructure Action Plan - 2012	• The key aim of the Infrastructure Action Plan is to enhance Scotland's digital infrastructure in terms of ease of access, geographical coverage, price and choice of provision for consumers. • Improving mobile coverage across Scotland is also an important element of the plan to ensure people have good access, wherever they are, to telephone and data services from hand held platforms such as mobile and smart phones, and tablets • continue to work with the UK Government and Ofcom to promote an appropriate and adaptable regulatory environment that is an enabler to achieving ambitions; notably in relation to rural mobile coverage
National Planning Framework 3 – June 2014 (superseded by NPF4)	• The NPF3 is aimed at encouraging a more positive approach to town planning. While the NPF builds environmental protection into the definition of sustainable economic development, there is also a very clear emphasis that local planning authorities should be looking for ways to help development come forward and not reject applications simply on environmental grounds. • The NPF3 recognises that this is especially relevant where a development might have other significantly important benefits such as being essential to meet, for example, sustainable economic growth or a national need which can include new mobile electronic communications infrastructure
Scottish Planning Policy – June 2014 (superseded by NPF4)	• Key Outcome 4 is to have a more connected place – supporting better transport and digital connectivity • States that the planning system should support the need for networks to evolve and respond to technology improvements and new services; • For development management consideration should be given to how proposals for infrastructure to deliver new services or infrastructure to improve existing services will contribute to fulfilling the objectives for digital connectivity set out in the Scottish Government's World Class 2020 document

	• For developments that will deliver entirely new connectivity – for example, mobile connectivity in a "not spot" – consideration should be given to the benefits of this connectivity for communities and the local economy • Planning authorities should not question the need for the service to be provided nor seek to prevent competition between operators • Infrastructure provision which is sited and designed to keep environmental impacts to a minimum

Scotland's Future - Connecting Rural Scotland - July 2014	• A plan to improve rural connectivity in different forms but including:
	  • Development of mobile and broadband technologies which have a central role to play in overcoming the challenges distance can introduce to rural life, but where coverage across rural Scotland is not good enough
	  • Removing barriers to investment in mobile networks

Mobile Action Plan – June 2016	• Action plan outlining steps that the Scottish Government and public-sector partners will take to improve mobile connectivity across Scotland including:
	  • Identify where the gaps will be after commercial rollout and jointly design technology solutions and business models that will allow services to be delivered by operators in a sustainable way - will range from interventions such as business rates relief through to more direct interventions, such as investing in the construction of new or enhanced infrastructure
	  • Further reform of the planning system and proposals for the further relaxation of planning controls to support commercial investment in digital connectivity.
	  • Maximise the wider coverage benefits of the Extended Area Services (EAS) project within the wider ESMCP and to ensure that, where possible, these new masts are future-proofed and open to all operators
	  • Explore the potential for a national 4G mobile infill initiative
	  • A clearer understanding of what additional rural backhaul capacity may be required in Scotland to underpin longer term investment by the MNOs and also the capacity requirements to make Scotland "5G-ready

Realising Scotland's full potential in a digital world: A	• The Strategy lists a wide range of actions that need to be taken in order to achieve the vision it presents. These actions including:

Digital Strategy for Scotland (The Scottish Government, 2017)	• Actions to deliver high quality connectivity across the whole of Scotland • Actions to promote diversity in digital • Actions to support people and communities • Actions to promote digital inclusion and participation • Urges UK Government and Ofcom to apply the "outside-in" principle when auctioning spectrum for 5G deployment and ensure that operators deliver coverage to the most rural areas before they deploy in urban centres
Scottish 4G Infill Programme March 2017	• The Scottish 4G Infill Programme is funding new mobile masts in locations with no existing 4G mobile coverage to improve mobile connectivity for communities and businesses.
Planning (Scotland) Act 2019	• The Act sets out high level changes to the overall framework under which planning operates; the detail of how the new provisions will work in practice will be contained within secondary legislation and guidance.
Digital Scotland - Forging our Digital Future with 5G: A Strategy for Scotland 2019	• Emphasises that the Scottish Government must act collectively to ensure that all of Scotland – including rural areas – benefits from this revolution • The Scottish Government's aspiration is for Scotland to be at the forefront of this revolution and, ultimately, to establish the whole country as a leading 5G digital nation • 5G is so much more than an upgrade of previous generations of mobile connectivity • Enhanced connectivity will make Scotland more productive and efficient as a country and play a vital role in the transition to a zero-carbon economy and tackling the climate emergency, e.g. through reduced emissions • 5G will be transformational for businesses, public services and for individual citizens • 5G also has the potential to help sustain remote and rural areas • The technical capability of 5G will satisfy the needs of a wide range of innovative so-called 'use cases' – in terms of extended bandwidth, reliable ultra-low latency, and/or a high density of connected devices • Facilitating 5G by preparing local authorities to support 5G deployment through being '5G ready' in terms of asset management and planning regulations as examples • Continue to support 5G Rural First initiative and possible neutral host network • Ensure the Scottish policy environment supports 5G rollout such as encouraging infrastructure sharing • To undertake a wide review of permitted development rights including those for electronic communications

	• To publish revised guidance which will replace the existing Planning Advice Note 62: Radio Telecommunications
National Planning Framework 4 (2023)	• Has a statutory standing and includes national policy 25 (Digital Infrastructure) – encourage, promote and facilitate the roll-out of digital infrastructure across Scotland to unlock the potential of all our places and the economy. • Now added emphasis on site sharing and existing mast replacement before new masts
WALES	
Planning Policy Wales	• Planning Policy Wales (PPW) acknowledges that widespread access to affordable, secure electronic communications infrastructure is important to both communities and businesses.

Mobile Action Plan 2017	• A detailed Action Plan to establish better mobile connectivity in Wales:
	  • To create the right environment to encourage further investment in mobile infrastructure and to promote innovation in mobile technologies including:
	  • If mobile coverage is going to improve there will need to be an increase in the number of mobile infrastructure sites in Wales, including in more scenic areas. A balance will need to be struck between mobile connectivity and the impact on the landscape.
	  • Statistics from Ofcom for television transmission are useful in highlighting the scale of the challenge. To reach 1 million people in England it requires 12 masts, in Northern Ireland it requires 25, Scotland requires 45 and Wales needs 67.
	  • Will look to consolidate the code of best practice and Technical Advice Note (TAN19) on mobile network infrastructure development.
	  • A reduction in non-domestic rates could be used to encourage investment in mobile infrastructure
	  • Welsh Government to continue to support emerging technology initiatives throughout the country including solutions to support rural businesses.
	  • Welsh Government will scope the extent of any public intervention to allow infill solutions where there is no usable and reliable mobile signal.
	  • Ensure much greater mobile connectivity along the road networks
	  • Examining the scope for future changes to the Permitted Development Rights Order for operators

Future Wales: The National Plan 2040	• Sets out the importance of telecommunications for national economic, transport, environmental, housing, energy and cultural strategies and ensures they can be delivered through the planning system • Committed to ensuring all parts of Wales are supported by the telecoms infrastructure they need • Encourages joint working between mobile network operators, infrastructure providers and local authorities to increase digital connectivity in the Mobile Action Zones identified
NORTHERN IRELAND	
DETI: Telecommunications Action Plan	• Sets out Executives wider strategy to support all forms of digital connectivity including mobile
Telecoms 2015 – 2017 - Continuing to Connect	• States that rural areas must also be beneficiaries of the Mobile Infrastructure Project UK, facilitated through DETI • DETI fully recognises the important role that good telecommunications plays in economic growth and will continue to work with the telecommunications industry and others, to ensure that appropriate infrastructure is in place to meet future demand
Regional Development Strategy 2035 (2010)	• Implement a balanced approach to telecommunications infrastructure that will give a competitive advantage • Improve telecom services in smaller rural areas to minimise the urban/rural divide, including mobile connectivity
Strategic Planning Policy Statement for Northern Ireland – September 2015	• Modern efficient telecommunications infrastructure that will give Northern Ireland a competitive advantage. • High quality communications infrastructure considered essential for sustainable economic growth • Ensure that the visual and environmental impact of telecommunications and other utility development is kept to a minimum