

Next Generation Broadband

Vision

To secure our future competitiveness, the United Kingdom needs to become the world's leading knowledge economy. The ability to trade and create digital goods and services is fundamental to that. This requires a robust digital infrastructure that can meet the demands imposed upon it at prices people are willing to pay.

Broadband in the UK

Since 1997 there has been a transformation in the way people communicate. In 1997 only 14% of the population had a mobile phone and less than 10% had ever used the internet. In 2007 there were more mobile phones than people, 70% of the population has used the internet and over half of homes have broadband. This has had a remarkable effect upon peoples lives – in the way people learn, work and play. The next ten years could see changes just as profound. Today, the United Kingdom consumers enjoy an excellent competitive market in broadband. There are around 450 Internet Service Providers in the UK, with the price for a 2Mbps connection being under £15 per month today, compared to £50 per month in 2003. The UK boasts a competitive telecoms market, a vibrant content sector and savvy consumers supported by an effective regulatory environment and a strong investment climate. This has led to high levels of broadband availability to over 99% penetration with over 50% of UK households now connected to broadband. All of this is happening, without large scale state intervention distorting markets. The UK is not unique in this approach, but has been particularly successful in driving up availability and penetration through it. Today's mass market broadband infrastructure appears to be sized correctly for the legitimate demands placed upon it by the majority of consumers. A 2mbps connection, available to approximately 93% of households is able to deliver standard definition TV and video, provide fast web browsing and online radio.

In the future, if demands for very high bandwidths grow, the United Kingdom will want to repeat this success: with a digital infrastructure provided by a competitive market, sized correctly for legitimate needs, for example delivery of a single High Definition Channel, or video would require a minimum of 8mbps reliable connection and fast downloads of HD files in future would require significantly more bandwidth. The evidence is not yet to hand on the extent to which that demand will materialise, and to upgrade elements of the existing infrastructure, particularly the final leg to 28 million homes will require substantial investment over the long term, where reliability and greater symmetry will become higher priorities.

However the availability of higher bandwidths has the potential to unleash creative and innovative ideas, as well as improving the delivery of services from the private and public sectors. Next generation access could:

Support businesses seeking efficiencies through greater flexibility and mobility, with remote and distributed work forces. They will want to be able to rely on their connectivity working on demand day and night. Online trading is increasing, and time critical file sharing is an application of increasing importance;

Revolutionise the world of entertainment, the video streaming on BBC iplayer demonstrating consumer appetite for on-demand entertainment. New products are emerging in a similar vein such as Kangaroo and paid on demand service and Apple TV;

Help deliver personalised healthcare services. The Department of Health are already helping to fund remote health care and telemedicine pilots in Newham, London, Kent and Cornwall today. Making these services widely available and developing them further, perhaps to the point of 3D imaging, will require the availability of high speed, reliable networks;

Enable distance learning using rich compelling content over networks enabling virtual classrooms, where students can interact in a 3D virtual world;

Allow geographically dispersed families to maintain regular contact, with the virtual visit becoming the norm. Distanced observation of ageing relatives and engagement with medical practitioners could save time, money and provide reassurance;

Much of this may be possible today, but by 2020 the expectations of today's children will be that this and more is common practice. This will require reliable, symmetrical networks to deliver, which will take a decade or more to provide.

But the future infrastructure will only be needed if we have future content – services for which customers are willing to pay that justify investment in higher bandwidths, and market structures that enable those who invest to get an appropriate return. The United Kingdom has outstanding strengths in digital content. But there is an inevitable 'chicken and egg' problem – without pervasive very high bandwidths it is hard to develop and experiment with innovative content that requires those networks. There is a risk that without the growth of the infrastructure our content industries will not have the freedom to innovate that they need in order to maintain their place in the forefront of international competition.

We are already beginning to see experiments with the deployment of high speed broadband in the UK, for example Virgin Media's pilot in Ashford, and BT's plans for a fibre network in Ebbsfleet. But the big unknowns are around how quickly investment will be made to deliver high speed broadband across the UK, and how far it will stretch outside city centres if left entirely to the market.

The United Kingdom telecoms market has shown in the past that it can deliver high levels of investment in long term assets and the market will remain central to delivering next generation broadband. Nevertheless, with the market for next generation access in its early stages, this seems an appropriate time for the Government to examine whether markets are functioning correctly to deliver the future digital infrastructure, whether there are barriers to investment and where adjustments to regulatory conditions that might be required and to consider whether and how the Government could intervene to facilitate developments in the market

The Government has therefore decided to establish an independent review to look at a set of focused questions around the potential barriers to deployment of high speed broadband. The review will report to the Secretary of State for Business, Enterprise and Regulatory Reform and the Chancellor of the Exchequer.

This will be an independent review led by Francesco Caio, working with relevant Government departments.

The key areas the review will consider will be:

- To consider the possible barriers to any new models of investment, involving collaboration between telecommunications suppliers and between suppliers and content providers and identify potential solutions;
- To examine whether there are opportunities to minimise the cost of private sector investment, including whether there is a public sector role in this respect, for example related to civil works;
- To examine the framework within which investment will take place to promote a more certain investment environment
- To clarify the treatment of new infrastructure options within the non-domestic rating system
- To examine whether the EU and UK statutory framework has given Ofcom the necessary powers to establish a regulatory regime which would provide regulatory certainty for investors and sufficiently incentivise new investment in high speed access;

In parallel, the Government will also ask the Broadband Stakeholders Group to examine the economics of fibre deployment, specifically whether deployment of fibre to the premises will be viable without a first step of deploying fibre to the cabinet.

In looking at these areas the review will be considering the impact of barriers on both speed and reach of likely deployment of next generation broadband. It will also take account of the current Ofcom consultation on NGA policy, which

this review is intended to complement, and the ongoing work of the Broadband Stakeholders Group following their report in April 2007. Ofcom will continue to develop their proposals for regulating next generation access under the existing regulatory framework.

Devolution means that the constraints this review seeks to address may differ in scope and application in different parts of the UK.