

The Future of Telecoms

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The recession and what it means for our sector

What started as a problem in an obscure corner of the US housing market is now a global recession. Each week brings fresh bouts of bad news in sectors as varied as motor manufacturing, high street retail and construction.

Telecommunications is far from immune. BT, Vodafone, Virgin Media and Cable & Wireless have all announced cost cutting measures and redundancies.

The theme of my speech today therefore is how policy makers and regulators react to these events, and how we can continue to deliver innovation, investment and infrastructure in a world that faces both cyclical *and* structural change.

Political leaders are also pondering these questions. What has already emerged is the significant role they are identifying for the digital economy - including the telecoms sector - as they plan their own countries' routes to recovery.

Some of the reasons for this are obvious. The sector is important in its own right, accounting for 4.5% of GDP here in the UK eighteen months ago. And no doubt it is higher today.

And telecoms, not least because our companies in Europe have been toughened up by several years of competition, is an area where the UK and the EU could expect to have a comparative advantage.

This is an advantage for both the telecoms industry as a whole, but also important for almost the entire economy, every sector of the economy which now uses and relies upon advanced telecoms networks to a greater or lesser degree.

These arguments are well known and well established, but I believe that there has been a wider and more fundamental shift in attitudes towards the sector.

European leaders are discussing a 1bn Euro package for Broadband – a comparatively trivial amount compared to some of the eye watering figures that regularly feature on the news. It's not even a minor bank rescue.

But the context is telling. The political mainstream now considers telecoms infrastructure to be critical to the 21st century economy. This is a topic no longer the preserve of physicists, engineers and economists. I would argue that no self respecting political leader can avoid having the digital economy as part of their plan for the future.

And the fastest growing current of all is broadband. In a little over five years, no longer a niche product, but now deemed essential for businesses and near essential for the modern consumer and increasingly of course essential for our modern idea of citizenship.

For the digital future debate to be transferred from the margins to centre stage is gratifying for those of us who have banged this particular drum for a number of years, but it also carries risks.

The first risk is the need to strike the right balance between making the change necessary to meet technological, cyclical and structural changes in the market, while also ensuring sufficient stability and predictability in regulation and policy to ensure the kind of environment in which companies and investors can meet these challenges too.

There is a risk that regulatory failures in relation to the supervision of financial services create a general climate of mistrust in the supervision of other sectors including this one.

And there is a risk that interventions deemed appropriate and necessary in the financial services sector – in particular to secure financial stability – are extended into other sectors.

At Ofcom we have already taken a clear view that unregulated markets do *not always* operate in the public interest and that private organisations may not *always* make the appropriate assessment of risk.

Equally, now *is* also the time to consider the framework for sectors which are significantly influenced by Government policy and by regulation. It is important for Governments to set out a vision for key sectors which influence the productivity of the broader economy and which affect all of us as citizens as well as consumers.

It is important for Governments to set priorities in these areas and then to take the decisions which it is appropriate for only Governments to make, in particular in relation to the use of public resources and the purpose and framework for regulation and policy.

We see this in a number of different countries today, in France with Numerique 2012, in Germany with the Federal Broadband Strategy and we see new plans emerging in Italy, Portugal, Ireland, Spain and in Finland.

And it is why I am a great supporter of the debate engendered by the Digital Britain project in the UK – where we look forward to a clear vision and set of priorities arising from the discussion under way and led by Lord Carter. The agenda is certainly the right one.

Aiding the recovery

If the sector has the strategic importance to economic recovery, the key requirement must surely be to create a structure capable of delivering what the wider economy needs.

Some may feel this is straightforward. For instance, there is great focus at present on the need for investment in super-fast broadband – an undeniably important issue to which I will return to in a moment.

But that debate highlights that, while telecoms has some utility features, it also has aspects different from water, electricity or gas and necessitate a different regulatory approach.

Unlike these other utilities, the value-added dimension of telecoms is not simply ubiquitous provision of a largely undifferentiated service. The enabling role that telecommunications plays in the wider economy actually relies on a constant stream of innovation.

No-one knows what the ideal network architecture, range of services, applications and content of the future is. There is no 'future-proofed' network requiring a one-off investment in a mandated technology by a monolithic bureaucracy.

It is possible, in theory at least, to regulate a state or non-state monopoly so that it delivers certain outputs. But that process of constant innovation – the discovery of consumer and business preferences - requires us to blend ambition for the future with a pluralistic market structure in which many actors have the ability to innovate and compete.

We should and must respond to the *actual* pressures of the recession. But in so doing, we must avoid undermining the necessary pre-conditions for future innovation and delivery.

It is important, for example, for effective ex ante regulation and a disciplined competition regime to survive the recession intact. Any change or move away from this approach should require a very clear and overriding public interest to the contrary, of the kind that I think we did see in the threat to financial stability in the banking sector but which are more difficult to see in other sectors.

Everyday competition

It's worth recalling the tangible benefits that a pluralistic structure and the dynamic process of competition have already delivered.

The availability of different services and lower prices in a newly unbundled area is not some theoretical benefit. It is immediate and obvious, especially to business and households on tight budgets.

Competitive constraints in turn mean that we *can actually* in some areas de-regulate - something of a heretical notion in the present climate, but still worth striving for where it can be done in a way which is consistent with the public interest.

Key to the benefits of better prices, better services are replacing regulatory pressure where possible with competitive pressure. It's worth saying openly that it is the likes of Cable and Wireless/Thus, Carphone Warehouse, Virgin, Sky, Orange and Tiscali along with smaller players like KCom and COLT, amongst others, that have been the engine of competition and innovation in fixed telecoms in the UK. They have been the challengers and BT, as historic incumbent, has picked up the mantle and responded with vigour.

It's important we continue to support this and maintain the dynamism at the heart because the UK in many ways hasn't done badly.

Let me just give you a couple of examples:

Our analysis of a typical basket of telecoms services used by a family (consisting of four mobile phones, a fixed-line voice connection, a broadband connection and a basic pay-TV service), found that prices available in the UK were 4% lower than in Italy, 17% lower than in France, 22% lower than in Germany and 46% lower than in Spain.

And our business pricing index for fixed line calls and line rental finds that prices have fallen by over 30% since 2003 in real terms. This reflects a more general trend in business pricing which has seen consistent reductions in the price of capacity over the past few years.

Indeed, competition on pricing in this area is notoriously ferocious and those who survive in this market have only done so by becoming leaner, fitter and more innovative.

The big questions in the future

None of this is an argument for the status quo.

On the contrary, it is possible to foresee now the conclusion of the first era of Ofcom's life, and the unfolding of a new phase.

The first five years of Ofcom's life were characterised by focussing on the fundamental problem of the previous twenty years - regulation of the enduring bottlenecks, ensuring downstream equivalence and, through it, effective competition.

More recently we have also significantly raised our game in ensuring effective consumer empowerment and consumer protection.

But the overarching questions that will guide our next five years build on this first phase and require a twin rather than singular focus.

In this new era, the focus must now be on sustaining and developing the competition that has emerged while *also* promoting the investment necessary to deliver the next generation of telecoms networks.

These two objectives are complementary. One drives efficiency, choice and innovation. The other creates the framework against which companies and investors build new products, services and further competition.

In the first phase of Ofcom's existence the focus was naturally on the first objective. While investment was required, it was investment in an established cable network and in an established and already near ubiquitous copper BT network.

Today we must concern ourselves not only with competition over these existing networks but with the challenge of investment in the next generation of networks as well – whether they be fixed or wireless and mobile.

And this links to a second big challenge.

The second big challenge for the new era is how to meet the emerging questions of availability and access.

The last few years have been a period of considerable success, with availability in the UK standing up to international comparisons, and take-up of broadband for residential consumers and businesses equally positive.

But we now enter a *new* phase – a phase where *new services* pose harder questions about access and availability.

The challenge of availability and access has two dimensions.

The first is for what we might call current generation networks and services, where we have seen the likely limits of roll-out driven by competition in current generation broadband and in 2G mobile.

In both cases these limits expose a shortfall – in so called ‘not spots’, the fringe of the network or indeed the limitations in speeds provided even when coverage is technically available. These issues now need to be addressed as these services can now be considered essential basics rather than some kind of leading edge innovation.

The second is the new generation of networks – and the critical question of how far will these new networks will reach.

This includes the advent of super-fast broadband, 3G mobile broadband and of course the prospect of Long Term Evolution services offering high bandwidth mobile services and indeed other technologies such as WiMax which may yet also play an important role.

The common thread here is the question of how far in the coming years the market will deploy the new networks and services - and how far is far enough, as these services are also increasingly seen as part of the essential infrastructure for the economy and of our lives in the future.

Finally, we too at Ofcom also have a modest role to play in a third major challenge which is the alignment of the network investment and capability with the role of the content that will be carried over these networks.

Let me now look at some of these questions, beginning with the issue of current generation access, availability and take up.

Access, availability and take up

Broadband remains a key barometer of the progress we have made in developing the UK's networks.

Prices have fallen and speeds have risen as more local loops have been unbundled.

Availability has improved. From around one in ten a few years ago, the proportion of households incapable of getting basic broadband is now measured in small percentages.

And take-up has surged from around 12% in 2003 to more than 60% of homes today.

But there are also reasons to suppose that we are now reaching the end of what the existing networks can do, and what the existing regulatory approach can deliver.

Targeted public intervention has filled in some 'hotspots' in a number of rural areas, but there are still pockets with inadequate and unreliable services.

We are beginning to see the emergence of services and applications that require faster speeds. There is already an *expectation* in some areas of life that people have ready access to good internet connections.

Yet at the same time take-up rates have levelled out, along with PC ownership. So take up remains a big challenge with much work to be done and to be discussed.

We need first to examine the reasons why so many people, nearly 40% of households, do not even have basic internet access.

Later this week Ofcom will be publishing new research that highlights the reasons why people are not online and or do not have broadband.

What our analysis shows is that we need to think about this issue of digital inclusion against two fundamental criteria.

- Are people persuaded that they want or need to have access to the internet?
- Do they have the financial and skills *resources* to access the internet.

When we do this simple two way cut, what we find is fascinating.

55% have decided they do not want it at all, even though they can afford it – we call these the '**self excluded**'.

30% are restrained by financial resources but would like to be online – we call these the '**financially excluded**'.

15% don't want it and don't have the resources anyway – we call these the '**dual excluded**'.

1% do want it but cannot access the network because the service is not available where they live – we call these the '**geographically excluded**'.

So, even though people are bombarded by messages about the range of benefits of being online – whether buying cheap insurance or catching up on last week's soaps – there seems to be millions of people who are not yet persuaded of the benefits.

We need to tackle this challenge as much as tackle the challenge of low-income households who can't afford access.

It's also time to ensure that anyone who wants a decent basic broadband service can get one.

The final figure above of only 1% excluded 'by geography' disguises a deeper and more profound problem.

These data reflect survey analysis focused on 512kbps. If we raise the bit rate to say 2mbps – then the 1% grows substantially to an estimated 15% who simply can't access a service of this speed at present.

This represents another major challenge, although it doesn't mean that 15% of the population will need a full network upgrade – it may be that in many cases simple and cheap improvements to in house wiring can deliver the desired speed improvements through technology such as BT's iplate.

The concept of extending the Universal Service Obligation was first raised at an international conference here in the UK more than two years ago.

It is now very firmly on the agenda thanks to the Government's *Digital Britain* initiative. Ofcom is helping with the design of a new scheme which we of course will have to implement.

You'll have to wait until Digital Britain reports in early summer. The questions that have to be resolved are not easy. There will be some important trade offs to make, in relation to precisely what we mean by 'universal', precisely what speed the commitment should deliver at and of course the costs arising from the answers to these two questions.

But I think a broadband USO will make a significant contribution to filling in those gaps of availability and speed for a good basic level of service and this is a priority.

The Networks of the future

But no-one, least of all the government, imagines that a commitment to a universal 2Mbps service or something similar is the final word in the debate.

There is almost no overstating how important it is to make sure we have the right circumstances for the next generation of broadband, capable of delivering much higher speeds, both up and downstream, able to work at distance from the telephone exchange, and delivering beyond the fixed-line.

Some super-fast broadband deployment is already underway. Virgin will be capable of delivering a 50Mbps service to around half of all the UK population by the middle of the year. Other, smaller scale deployments are also taking place, including some very innovative development using alternative infrastructure ducts such as sewers.

These moves are very important. In Virgin's case, it puts pressure on Sky to develop its own pay TV and super-fast broadband bundle. This puts pressure on Openreach to deliver next generation products fit-for-purpose.

But it is still important that the regulatory parameters are right for full scale deployment of wholly new networks.

The five regulatory principles for super-fast broadband are:

First, there should be pricing freedom. We've said we won't intervene to set wholesale prices - at all. This will give BT freedom to price in the investment risk they are taking.

But this is only freedom from regulatory control – it's not freedom from competitive pressure of cheap and increasingly fast first generation broadband. This will do the job of disciplining prices overall.

Secondly, those who invest do need assurances that upstream competitors will not be able to enter late and make use of the new infrastructure at pure marginal cost. There must be a fair rate of return that genuinely reflects initial investors' costs and associated risk.

Thirdly, we will ensure flexibility in the application of the undertakings to reduce unnecessary inefficiencies that could act as a deterrent to investment.

Fourth, alongside investment goes competition. New active-based fibre products should be available to BT's competitors on equal terms and without favour.

And fifth, the way should remain open for further competition even after the new networks are in place. Again, attempting to promote investment but also secure the scope for upstream competition in the longer term.

Taken together, these five principles mean that the way is fully clear for wide scale deployment by BT and others. Excepting dramatic changes to circumstances, consumers can now reasonably expect the telecoms business to deliver.

Beyond market-led investment

This should see market led and competitive development of the first phase of super fast broadband.

How far market-led investment will take us is the next question.

For Ofcom, it's the next phase of our work.

Undoubtedly here precedent is a poor guide. For DSL the underlying network was already in place. The economics around the new networks are very different and more challenging.

So, we need to understand how far the market will go over the next few years. Will it be 50%, 60% or significantly higher or indeed lower?

If we assume that the market will stop far short of near-universality, we are left with two choices.

We can either accept the fact of networks that will develop in a very uneven fashion, with prominent population density and socio-economic cleavages and differential business and consumer access.

Or we start to consider how we sculpt the policy or regulatory contours further so that investment flows faster and wider.

And we need to do this in the context of a clear idea of where we want to go in the medium term. In other words, do high bandwidth fixed and mobile networks matter to us as a country, and does it matter whether they are widely rather than partially available?

If the answer to these questions is yes, then we need to think now about how to get there.

The key questions, especially in the present environment are how much and when?

But even without a recession our lodestar should be the same - to seek to focus public or regulatory intervention as closely as possible on clear objectives which support market led development and secure competition as well as investment for the long term.

In this context, there are three clear phases for the issues around super-fast broadband.

Phase one is market led development – for which the framework is now in place and the process underway.

Phase two is working out how far and how fast the market will take us against this framework and what if anything we want to do about that. This will be a focus for Ofcom in the coming months.

Phase three involves considering what steps need to be taken to move from the first chapter of fibre-to-the-cabinet, to the next chapter of fibre-to-the-home. From 50mbps to speeds in excess of 100mbps.

While these appear to be sequential, they are of course fundamentally intertwined and in Ofcom we try to think about them together and in a structured way.

The framework for the first phase is pretty much complete and the interconnections with the second and third phases are becoming clearer.

Securing the wireless future

As the demand for ubiquity in networks intensifies, the availability of fixed-line networks will come to represent only one part of the mix.

Moreover, the emergence of improved wireless solutions has relevance in all sorts of different ways.

The faster wireless goes, the closer it gets to first generation fixed broadband speeds. The closer it gets, the harder it becomes to justify sticking at the technology that supports these speeds. So wireless and in particular mobile services provide a competitive spur to next generation investment.

Secondly, it provides the potential to deliver higher speed in areas where fixed-line

deployments are commercially unattractive or perhaps technically impractical. There is a potential link to the universal service commitment for broadband here.

But thirdly, and in a sense most fundamentally, people and businesses have shown how much they want mobile services. And mobile broadband is no exception. So I believe that we will see greater and greater demand for mobile broadband and at higher and higher speeds, regardless of what is happening in the fixed environment.

Access to spectrum remains the key input for better, faster, cheaper and more innovative wireless services.

That process will stall without new spectrum, recently cleared or with the potential to be cleared, being released for new services.

Perhaps inevitably when big corporate interests are challenged, some vital blocks of spectrum have become entangled in legal obstacles.

But we are clear that a programme of spectrum liberalisation and of spectrum release remains a high priority for Ofcom because it is a high priority for the businesses and residential consumers of the UK.

I welcome the government's attempts to secure an industry agreed solution compatible with competition law, the European framework and in the interest of UK citizens and consumers.

I hope that this process does yield a practical way forward. If it does not, we will press on with a regulatory route to get the job done and to release spectrum which is the crucial raw material for mobile broadband services.

The third challenge, aligning content and networks in a mutually reinforcing way – a big challenge for the long term – will be a subject for another day.

Conclusions

In conclusion, I expect the effects of the global economic turbulence to have an effect on the pace and the extent of new network roll-out. And I am not remotely complacent about what could happen in the short-term or indeed what Ofcom or others may need to do to respond should circumstances change again.

But I'm also clear that we expect telecoms and the new services enabled by more advanced telecoms networks to play a major role in the next couple of years and indeed in the post-recession world.

It is essential in these volatile and challenging times to question and scrutinise the regulatory and policy underpinnings of all sectors that are important to the UK and European economies – particularly those with future growth potential such as digital communications and broader digital economy.

As an infrastructure sector crucial to so many others, it is legitimate for telecoms to fall under that spotlight.

The proposition I have advanced here is, I hope, a contribution to that ongoing debate.

In Ofcom's first phase, our focus was on regulating those areas where conventional market forces were most dimly felt.

For the future, the need is to ally competition to new investment, to access and availability and to support, where necessary, the resolution of content and networks in a mutually reinforcing commercial relationship rather than mutually destructive relationship.

In this way the networks of the future will emerge, capable of meeting the communications *needs* of the future, to me

- we want to see super-fast speeds
- we want to see widespread availability
- we want them to be mobile as well as fixed and
- we want to see competition embedded as part of the future as well as the present.

I believe all of this is achievable if we get the framework right.