



Rt Hon Jeremy Hunt MP
Secretary of State
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Our Reference:

Your Reference:

Date: 30 June 2011

Dear Secretary of State

A Communications Review for the Digital Age

SSE is a large, FTSE 100 company with its primary focus in UK energy markets, having subsidiaries in the retail supply of energy products, in gas and electricity networks and in power generation and gas storage. It also has interests in the communications market: having a network infrastructure subsidiary; a separate retail communications business built up using the wholesale products available; and through its use of communications infrastructure – for example spectrum assignments – in support of its core energy operations.

We welcome the open letter of 16 May and the intention signalled by the Government, within the open letter and in the earlier document “Britain’s Superfast Broadband Future”, to review the regulatory regime for the UK communications sector. SSE has experience in the liberated but still regulated energy markets and based on this, there are several key themes from our detailed response that we would like to highlight, as set out below.

- Networks and the provision of retail services using the networks in the communications market should be regulated separately.
- Within our response, we advocate that an industry-owned market body is established, which maintains the coordination necessary for market processes to work smoothly.
- Such a market body would manage the change and development of processes, thus future-proofing initial arrangements, developing them as required to accommodate new products, new technologies and market changes.
- Indeed, if such a body existed today, the current process of introducing fibre technology into the largely copper access networks would be managed “behind the scenes” as a network infrastructure upgrade, with the market processes and products developed smoothly and without market shocks under the auspices of

that body.

- Looking to the opportunity of the vastly increased communications capacity, which is becoming available at individual premises with the introduction of fibre technology, we illustrate in Appendix 2 and discuss in our response how that capacity could be used to support a whole range of different service providers – a “multi-channel” model.
- If, as we advocate, the right climate and framework is established to encourage large numbers of different services to be provided over a “multi-channel” fibre-based access link, it is our view that the cumulative effect of moderate, level, “pay-as-you-go” network charges summed over all such services is likely to boost the commercial case for fibre roll-out, thus reducing the amount of public subsidy needed to achieve the Government’s targets.
- The development of applications such as health monitoring appears to be a key plank of the Government’s plans for use of fibre-based communications access capacity. Some of these would need to be “always on” to achieve their monitoring objectives and should not be adversely affected by the withdrawal of other communications services on the access link. Bluntly, the system would be perceived as having failed if someone dies because, say, their heart monitoring service was shut down due to their internet browsing facility being withdrawn for non-payment. These considerations support the use of a “multi-channel” approach to managing the capacity of the new fibre-based communications links rather than any approach which locks the entire channel capacity to one retailer.

We build on these points in more detail in our responses to the questions in the open letter, which are attached as Appendix 1.

I hope this response is helpful in the initial phase of the Government’s review. We would welcome the opportunity to contribute to the ongoing dialogue on these issues.

Yours sincerely

Aileen Boyd
Regulation Manager

Response to Questions in Open Letter

Growth, innovation and deregulation

Q1. What could a healthier communications market look like? How can the right balance be achieved between investment, competition and services in a changing technological environment?

SSE believes that a healthier communications market would be characterised by a clearer separation between the regulatory framework applying to communications infrastructure and that appropriate to the services that can be delivered over that infrastructure.

Applications, content and services are the media through which end customers use communications infrastructure and it is the quality, quantity and choice of these that they are interested in. Demand for these services stimulates the engine of creativity and growth for the whole economy. The networks and engineering that support the experience of using services are not of great interest to an end customer unless they appear not to be working.

In contrast, the communications infrastructure serving the “mass market” of domestic and small business customers is perceived as a utility in today’s world – it should work properly in order to support services that are, increasingly, needed for society to work properly. We believe that its regulatory framework should have more in common with other areas of utility network regulation such as that applying to energy, water and railway network infrastructure. In particular, it should require provision of non-discriminatory access at an appropriate level of the communications network hierarchy to retail service providers and other wholesale service providers. It should also require infrastructure providers to take on the role of coordinating the organisation of market arrangements to support the provision of services.

For services and applications, we would like to see a dynamic market of multiple suppliers being able to innovate and use various wholesale inputs from other parties, as required in order to react to market-led preferences for products and services. The general theme for this part of the market should be deregulatory, relying more than at present on general consumer protection legislation. This could be supplemented by sector-specific regulation where the particular circumstances of the market warrant but the most important requirement for those considering investment in this market is that they can easily bring their product to the market and gain customers in an orderly manner. In other words, the arrangements for customer switching and management of the services available at the network termination points is very important for investment and sustainable competition where competitive services are to be delivered over a utility infrastructure.

The above requirement links in to the key characteristic required from the infrastructure sector of the market – that of coordination such that a variety of market and consumer benefits can be realised. These include:

- **seamless switching for consumers between networks or different service providers on the same network;**
- **supplier of last resort provisions for essential services such as voice (and broadband/data?) connectivity; and**

- maintenance of standing information such as directory entries, telephone number used (since these can be “ported”), address and emergency service location information.

It can be seen that these coordinating functions rely, at base, on the maintenance of standing data about the characteristics of a communications link and the end customer served by it. In our view, it would be difficult to imagine a well-functioning services market based on delivery through network infrastructure, where the information about the relevant characteristics of the network termination points were not centrally maintained and governed to ensure the completeness and integrity of this base of data as customers change the products and services they consume.

This is not to undermine the importance of competition in the infrastructure sector of the market: investment in networks should be supported by regulatory frameworks as a contestable activity. However, over time, there tend to be relatively few infrastructure providers of national scope after market consolidations. On the other hand, the technological change represented by fibre technologies is bringing interest from various regional projects in delivering high capacity communication networks in local regions. We believe these networks should be able to “plug in” to an existing framework whereby the customers on their network termination points are able to access the same dynamic market of services and suppliers that is available to customers at the termination points of the main existing “mass market” infrastructures.

In our view, there are gaps in the coordination of the market in this area and also in relation to customer switching, although the Government will be aware that Ofcom is trying to tackle the latter of these issues. However, Ofcom does not appear able, within its existing framework of powers, to require industry to work together to achieve a coordinated approach to many market issues that have arisen and for some players, it is not within their commercial interests to do so.

We therefore believe that a key opportunity of the Government’s review is to establish the paving for an industry-led market body that controls and maintains the coordination necessary for “back-office” processes – such as the seamless switching mentioned above – to work for the benefit of customers and sustainable competition in the services (and contestable infrastructure) sectors of the market. This body would have to be carefully designed to have transparency and legitimacy across the spectrum of market participants – including the large number of suppliers using active wholesale products who do not have a capability in the basic engineering of communications products but who nevertheless provide valued services in the market.

The benefits would include less involvement on a day to day basis from Ofcom in sorting out the issues arising from the lack of this coordination – in this sense, a deregulatory move. We believe the body should be co-regulatory such that Ofcom has some input and communication with the body, perhaps approving major developments in the detailed processes it controls and having a role in the disputes and appeals processes that would be entailed in the body’s governance.

If such a body could be successfully established in the communications market such that the industry itself is required to maintain processes and develop these as markets and technology change, we believe that this would have lasting benefit for

the climate for investment, competition and services. Those investing in either networks or services would have a clearer view of the market rules for their sector and have confidence that these would be developed in an orderly manner. Competition would benefit because there would be greater confidence in investing and the very purpose of the body would be to facilitate the smooth operation of the back-office processes that underpin competition. Finally, there would be a greater chance that widespread availability of the applications and services that customers are interested in i.e. the vision of “any service, anywhere over any network” would be achieved than in the current framework, where responsibility rests with no market participant nor with Ofcom to facilitate this.

Q2. What action can be taken to facilitate greater innovation and growth across the wider competition regime, and how can deregulation help achieve this?

As discussed in response to question 1 above, we believe that the Government should take the opportunity of reviewing the regulatory framework for the communications market to separate regulation of services from regulation of infrastructure and establish a market body to look after the back-office processes which enable and support competition in the market.

In particular, we consider that it would be appropriate for the Government to use some of the funds available from those it plans to spend to support superfast broadband roll-out in order to develop initial forms of market processes and platforms. We were heartened that the Broadband Future document issued in December 2010 makes reference to interfaces, standardisation and a “single transport solution” allowing any communications provider (CP) providing services to offer those services to end users in a consistent way regardless of the CP providing the access infrastructure¹. We fully support this vision – particularly for the reseller sector of the service market to which we belong and which needs active level wholesale products to be able to compete, not the passive wholesale access remedies that Ofcom has so far championed.

We understand that there are still difficulties in achieving the vision of services able to use any access infrastructure in practical terms. There will need to be initial effort to establish how this will work, what the rules of interaction will be and how systems will be able to develop over time as markets and technology change. This is why we advocate that the Government spends some of the available funds in the short term to establish IT and governance systems and processes with a view to handing over management, maintenance and development of the systems to an independent market body, funded on an ongoing basis by industry. The opportunity of the review of the regulatory framework and the work towards a new Communications Act should be used to ensure that the appropriate statutory and regulatory backing for this entity is put in place.

We believe this effort will be worthwhile in clarifying the way that the infrastructure side of the market is to be governed and how new services and new infrastructure can be brought to the market with a clear path for the underlying processes to be developed as required. This would form a stable but flexible platform for growth in the services available in the communications market.

In terms of deregulation, we support this for the services side of the market but are cautious about how it might be applied to infrastructure. In our view, a regulated

¹ Page 22/3, paragraphs 4.8 to 4.14 discuss this vision.

framework for the infrastructure side of the market requiring coordination and support for competition is a pre-requisite for healthy competition to evolve in the services market and in the provision of further contestable infrastructure, as we have discussed in response to question 1. To the extent that this can be maintained and governed by a market body, funded and run by market participants, this could represent a form of deregulation. It involves a greater role for the industry in governing itself and a more high-level supervisory role for Ofcom – thus reducing the need for Ofcom resources to become heavily involved in fixing problems once they have emerged.

Q3. Is regulatory convergence across different platforms desirable and, if so, what are the potential issues to implementation?

In principle, convergence of regulation applying to different infrastructure platforms would be desirable so that rules for access to and switching of services across all these infrastructures are consistent. It is highly likely that services able to use the most economic infrastructure – be that fixed line or wireless – will develop: competition would be distorted if access by mobile service companies to fixed infrastructure is more readily obtainable than access by fixed-line service companies to mobile infrastructure, which currently appears to be the case. Potential issues include: lack of any requirement for mobile network operators (and many fixed-line infrastructures apart from the regulatory wholesale access obligations applying to parts of BT's network) to provide access to their networks and the lack of separation of the services element from the infrastructure operation across the market, as discussed above.

In our responses to questions 1 and 2, we have outlined our proposed approach to management of mass-market fixed line infrastructure. We believe similar coordination and industry involvement might be useful in developing a sustainable form of management and coordination of spectrum use.

Q4. What barriers can be removed to facilitate greater exports and inward investment and make the UK more globally competitive in digital communications?

As discussed in our responses to the 3 questions above, we believe that coordinated management of the communications market will clarify market processes and promote investment in both infrastructure and services. If the innovative dynamic of smaller service providers can be harnessed because it is easy for them to enter the market and grow their customer base, then we believe that the UK would be well on the way to establishing a vibrant communications services market, with the export potential that this implies.

A communications infrastructure that provides the foundations for growth

Q5. What further market and regulatory developments would lead to widespread take-up of superfast broadband? What regulatory action would government need to take to make superfast broadband more readily available in a) urban areas; and, b) rural areas?

We agree with the sentiment in the open letter that efficient management of broadband infrastructure (as well as spectrum) is required to support the delivery of services over these communications infrastructures. In our responses to the previous section of questions, we have outlined the developments that we think would help to achieve efficient management of the market for delivery of various services over existing and developing communications infrastructure.

The emphasis of this question is on the next generation of “superfast” broadband and we believe it is again helpful to separate out the infrastructure element of broadband, which relates to the technical capacity of the communications link under consideration, from the “service” element of broadband. An end user’s experience of a broadband service relates to what it enables them to do and have provided to them. This could consist of accessing some or all of the following list of services:

- making calls away from the main switched telephone network (Voice over Internet Protocol);
- watching catch-up TV or films;
- using email;
- browsing various websites for information or for purchasing goods and services;
- tele-medicine; and
- health monitoring.

The last two of these have yet to be fully developed but we believe they are typical of the sort of application that the Government would wish to see developed to use the wide bandwidth available over a “superfast” broadband infrastructure link. The difference between these type of services and the others on the list is that they are likely to be provided for the end customer by means of a contractual relationship between a Health Authority and a service provider – who in turn needs access to an element of the communications capacity available at the customer’s premises. This contrasts with the other services, where the customer is likely to enter into a contractual relationship on his own account with ISPs and/or entertainments providers to be able to use the services he wishes.

In Appendix 2, we have shown these uses of a “broadband” communications link diagrammatically, including the “indirect” services such as the telemedicine and health monitoring discussed above. Consideration of how to manage this “multi-channel” access link to multiple service providers suggests that a form of “system operator” might be a useful function, which could evolve out of the market body we have already proposed. It would develop processes to manage the capacity available for services in an independent non-discriminatory manner, ensuring that different services did not interfere with each other.

Thinking about the wide range of services that potentially could be provided via a “superfast” broadband infrastructure link does prompt two further thoughts about the market and regulatory arrangements that would be necessary to allow this model to thrive.

Firstly, in order to avoid bottle-necks and market power developing in the provision of services over the super-fast infrastructure, no one party should be allowed to exclusively “own” the capacity of the access link to consumer premises – as has been allowed to happen with the local loop unbundling of current access technology. This capacity should be made available by the infrastructure provider to the market, being duly recompensed by the service providers who use it. In fact, his investment will be more amply rewarded the more individual services are used over the link. The widespread availability of services, demanded by customers, will therefore improve the commercial viability of infrastructure investment and reduce the need for public subsidy as the market-led roll-out of these new technology infrastructures will reach further if customers are seeking to use more services

available over that infrastructure. This same model will allow for safety of life services – such as tele-medicine – to continue uninterrupted in the event of potentially disruptive issues such as withdrawal of a communications service for non-payment or commercial failure of an ISP.

Secondly, it is evident that structure of charges levied for access to infrastructure will be an important element in the health of the services market. This economic issue has been explored in other network utilities such as energy. The balance between up-front connection and ongoing “use of system” charges designed to recover network costs over a reasonable period will have a significant effect on the retail markets downstream. High up-front charges deter investment in the provision of services and lead also to the need for tied-in contracts and termination charges that in turn deter customers from switching to more attractive alternative service products – as has been increasingly seen in the retail communications market to date. In contrast, more level “pay-as-you-go” charges that recover infrastructure costs evenly over a reasonable asset life do not create these effects. The infrastructure service provider is also neutral to the end customer moving from one supplier of a service to another over the same infrastructure as both suppliers will be paying similar infrastructure charges for their wholesale access.

Thus, we believe that the following areas should be addressed by market and regulatory developments designed to assist widespread take-up of superfast broadband:

- independent management of the capacity provided to the end customer so that multiple services from a range of competing service providers can be provided over the link; and
- some form of governance and regulation of the structure of charges that infrastructure providers are allowed to levy on service providers – as is common in other regulated network infrastructures.

In conclusion, we believe that the regulatory action by government that would help to make superfast broadband become more readily available in both urban and rural areas is a combination of:

- creating the conditions to encourage the supply side of the market to invest in delivering and marketing products and services which use the increased bandwidth of superfast infrastructure and that customers will want to purchase; and
- requiring the infrastructure provision side of the market to coordinate and be governed in the ways described so that the suppliers have confidence to invest, thereby also increasing demand and revenue for the infrastructure providers.

In urban areas, the emphasis is likely to be on requiring infrastructure providers to allow active wholesale access for the providers of services over their infrastructure – thereby allowing the marketing effort of multiple supply brands to inform customers of the services available over the existing infrastructure.

In rural areas, the emphasis is likely to be on ensuring that a patchwork of new infrastructure providers have a clear market infrastructure to “plug in” to such that the customers on their infrastructure have access to the wide range of services available in other parts of the country – as discussed in our response to question 1

above.

Q6. What are the competing demands for spectrum, how is the market changing and how can a regulatory framework best accommodate any rapidly changing demands on spectrum and market development?

Q7. How should spectrum be managed to deliver our growth objectives whilst also meeting our policy objectives of furthering the interests of citizens and consumers in relation to communications matters?

Q8. How should the UK engage on an EU/International level in relation to spectrum?

The above questions all relate to spectrum use and management. SSE uses spectrum assignments to support its operations in controlling generation and network plant in order to secure the wider electricity supply system, which is clearly part of critical national infrastructure (CNI). The continued and secure operation of this and other aspects of CNI supported by spectrum use is also clearly in the interests of citizens of the UK. Over the last few years, as spectrum has been subject to more market mechanisms such as trading, various issues and risks have arisen with respect to our assignments due to them being treated in the same way as spectrum used for commercial purposes. To reduce these risks, we therefore believe there is a case for managing spectrum in a more holistic manner, allowing for separate treatment of spectrum used for CNI where necessary.

On a more general note, we believe that spectrum management may well benefit from some of the principles we have drawn out and proposed for managing communication infrastructure including supporting superfast broadband capability. Indeed, at the extremities of the network, wireless solutions may be needed to deliver appropriate levels of “superfast” connectivity. The relevant themes include:

- **separation of the regulation of infrastructure from that covering services using that infrastructure;**
- **open wholesale access to the wireless infrastructure networks to allow for delivery of multiple services; and**
- **the development of a co-regulatory market body to administer, maintain and develop any necessary market rules which promote competition in services and the provision of additional wireless infrastructure, against the background of technological and market change.**

Q9. Is the current mix of regulation, competition and Government intervention right to stimulate investment in communications networks?

No. The current set of General Conditions do not clearly separate out the regulation applying to infrastructure from that applying to services provided over infrastructure and the market for retail services is not supported by regulation as well as it could be. Ofcom appears not to have the powers to require the type of coordination necessary between infrastructure providers in order to provide and maintain the “back-office” processes (such as customer switching) which we have argued in this response is needed to support competition in retail service provision. Since the demand for retail communications-based services is an engine for growth which supports both the investment in communications infrastructure and the wider economy, we believe it is important for the Government to intervene to develop sustainable regulatory and market mechanisms to support the communications services market. In other parts of this response, we have set out how we believe this could be achieved.

Creating the right environment for the content industry to thrive

Q10. Are there disproportionate regulatory barriers to investment in content? If so, what are they and how can increased investment in UK content production be encouraged?

Q11. Should the core focus of public service broadcasting be on original UK content?

No comment.

Q12. What barriers are there to innovation in new digital media sectors, including video games, telemedicine, local television and education?

In our view, potential investors in these sectors cannot clearly see how their products could be made available across all communications infrastructures. In particular, the market structure does not yet exist whereby the provider of a safety of life service such as telemedicine could be assured that the capacity he needs to deliver his service using connectivity provided by different access infrastructure providers (depending on where the end customer lives) would not be affected by other services – in other words he cannot have a dedicated “pipe” into a customer’s premises.

Our responses to the earlier questions in the open letter make suggestions for improvements in the way that the market works. We believe the Government needs to intervene to set up the necessary organisation for a sustainable communications-based services market that would allow these and other, as yet unforeseen, services to thrive.

Q13. Where has self- and co-regulation worked successfully and what can be learnt from specific approaches? Where specific approaches haven’t worked, how can the framework of content regulation be made sufficiently coherent and not create barriers to growth, but at the same time protect citizens and enable consumer confidence?

We are not aware of any specific instances where self-regulation has been successful in the networks and services part of the communications market. Due to the differing commercial positions of different market participants, it is unlikely that there would be sufficient common ground for self-regulation to be successful. It also lacks a credible means to enforce compliance on participating bodies.

In our view, there needs to be a way in which market developments that do not suit all participants (but which nonetheless are needed in terms of benefits for consumers or competition) can be enforced. Co-regulatory initiatives are perhaps a more flexible means than full regulatory control in achieving policy objectives.

A well constructed co-regulatory arrangement has the potential to facilitate efficient trade-offs between market participants, who are all more well informed about the true costs of different ways of achieving policy goals than the regulator. It could also allow prospective market issues to be addressed while formal regulation is biased towards the status quo, requiring significant evidence of actual detriment and formal cost/benefit analysis before being able to impose any measures to correct a perceived problem some time after the event. A further benefit is that co-regulatory arrangements shift the burden of day to day costs from the regulator to the industry while maintaining regulatory input at high level and the overall accountability of the body to the regulatory authority.

A co-regulatory approach that seems to have worked well is in the area of alternative dispute resolution, perhaps assisted by the specific references to the

requirements for independence set out in s54 of the Communications Act. The bodies which exist – ‘Ombudsman Services: Communications’ and CISAS – are approved by Ofcom but funded by their industry members. We are familiar with the former organisation and are aware that their working methods and approaches have evolved over time and that there is industry representation on their Board structure. This model for dispute resolution has subsequently been adopted in other industries including energy supply.

Although SSE was not required, due to its relative size in the market, to participate in the quality of service body Topcomm, which was withdrawn a few years ago, this seems to be an example of a form of co-regulation that did not work very well. It appeared to be burdensome for members and lacked flexibility to amend its own procedures to achieve outcomes because the principal document setting out those procedures was an Ofcom Direction, which could not readily be changed.

Turning to our experience in the energy market, it is worth noting the market governance arrangements in place in this industry. Here, licence conditions on local electricity infrastructure providers (known as distribution network operators or DNOs) require the maintenance of an agreement between licensed DNOs and licensed suppliers known as the Master Registration Agreement (MRA). This document is designed to specify how data is maintained and transferred between parties to facilitate the competitive market in energy supply. As part of the industry-led governance of this set of market rules, the regulator Ofgem has a role in reviewing and vetoing any changes to the rules that do not, in its view, meet the relevant objectives of the agreement. An independent company administers the MRA and more information can be found at its website <http://mrasco.com>. Being familiar with this governed approach to competitive service delivery over a regulated infrastructure has influenced our views on what could be achievable through a similar model in the communications market.

We would also like to hear about how the relationship between the three themes affects their development and how this will change over time as platforms and services continue to develop.

With respect to the three themes set out in the open letter, our view of the inter-relationship between the three is summarised as follows:

- innovation is rewarded and growth driven by providing what end customers want;
- retail service providers specialise in developing products that customers want, where necessary entailing innovation and development in the wholesale supply chain to match customers’ needs;
- in a network-based “mass market” industry, the specific regulation on competitive retail service provision should be minimal (a deregulatory approach) BUT
- the retail market here needs to be supported by market processes and open access to the networks at appropriate wholesale levels;
- thus the infrastructure side of the communications market should be regulated to provide open access and market support;
- this approach to regulation then provides the foundations for growth and the ability for content services (and other services using communications infrastructure) to thrive; and finally

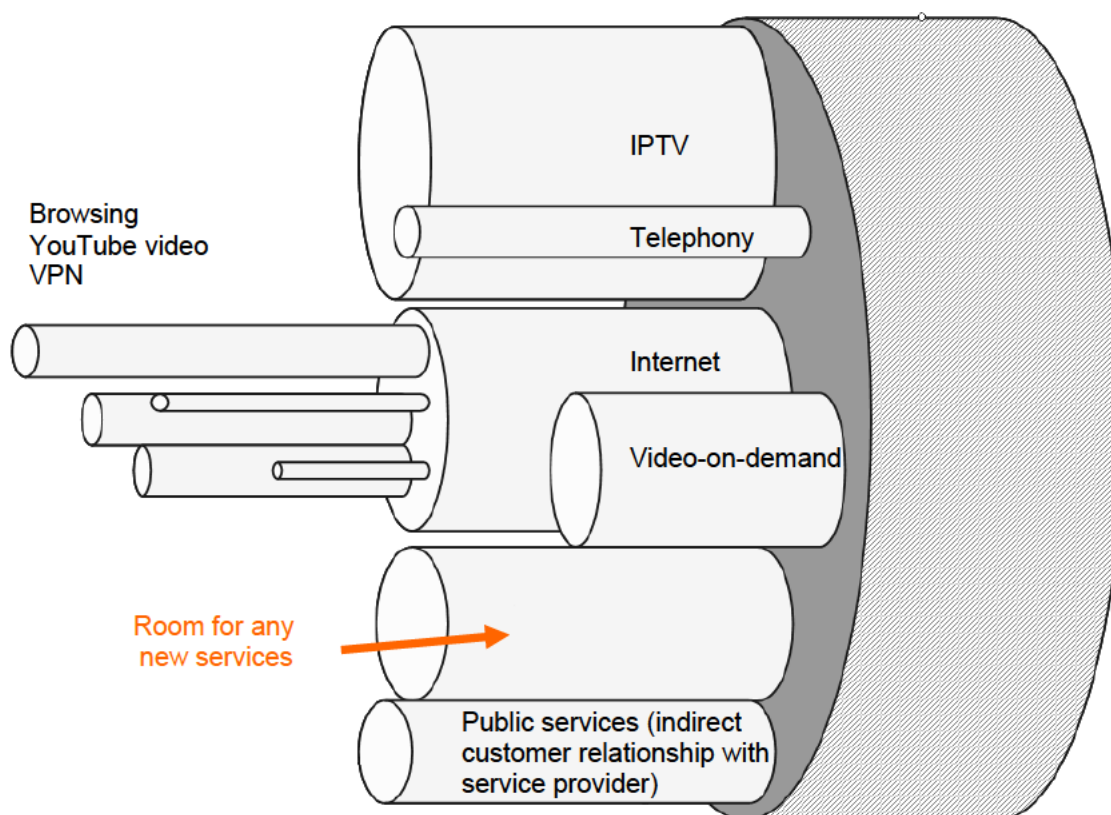
- industry governance of the market processes allows them to be developed in an orderly manner as platforms and services continue to develop – building in a future-proof approach to market support.

Appendix 2

Diagrammatic representation of the use of capacity on a superfast broadband link

A “multi-channel” access approach

As discussed in our response to question 5.



Notes

- Each of the channels use a proportion of the overall capacity of the link and would pay a proportionate “use of system” charge to the infrastructure provider for that use.
- Multiple service providers or suppliers can use the link without affecting the service provided by other suppliers.
- For “direct” services that the customer arranges on his own behalf, he would pay the service provider who in turn pays the infrastructure provider for the capacity use.
- For “indirect” services – labelled above as “public services” and which could include health monitoring and tele-medicine as discussed in the response – the service is provided for the benefit of the end customer by a third party such as a Health Authority. The third party would pay the service provider who in turn pays the infrastructure provider for the capacity use.