



Creating a brighter future

Response to the 'Public Consultation on the Cloud Computing'.

31 August 2011

Contents

General Comments.....	3
Questionnaire Response	3

General Comments

The FTTH Council Europe (hereinafter the FTTH Council) welcomes the opportunity to participate in this ‘Public Consultation on the Cloud Computing’.

The FTTH Council is an industry organisation with a mission to accelerate the availability of fibre-based, ultra-high-speed access networks to consumers and businesses. The Council promotes this technology because it will deliver a flow of new services that enhances the quality of life, contributes to a better environment and increased competitiveness. The FTTH Council consists of more than 150 member companies. Its members include leading telecommunications companies and many world leaders in the telecommunications industry (additional information is available at www.ftthcouncil.eu). Telecoms operators are not members of the FTTH Council and we have our own perspectives regarding the appropriate regulatory policies to accelerate NGA deployments.

Questionnaire Response

Section ‘Your Profile’

Questions 1 through 8 (admin...)

Question 9: Tick ‘other’

Question 10: The FTTH Council is an industry organisation with a mission to accelerate the availability of fibre-based, ultra-high-speed access networks to consumers and businesses. The Council promotes this technology because it will deliver a flow of new services that enhance the quality of life, contributes to a better environment and increased competitiveness. The FTTH Council consists of more than 130 member companies. Its members include leading telecommunications companies and many world leaders in the telecommunications industry (additional information is available at www.ftthcouncil.eu). Telecoms operators are not members of the FTTH Council and we have our own perspectives regarding the appropriate regulatory policies to accelerate NGA deployments.

The FTTH Council believe that the widespread deployment of FTTH will facilitate enormous benefits for the economic and social development of Europe. Many of the potential uses of FTTH, such as home working and the extensive use of Cloud based applications, will have significant impacts with them which can be classified as positive externalities. In the case of home-working, this could be relief of traffic congestion allowing other commuters to save time as well as positive environmental impacts. In the case of Cloud applications lowering costs and the use of innovative services, delivery can be anticipated in addition to the direct benefits. In these circumstances, the benefits accruing to society often go far beyond the direct economic benefits identified by investors.

The FTTH Council notes that this Cloud consultation seeks stakeholder input to the legislative framework for Cloud service. However the FTTH Council feels that a central

theme is missing in the consultation; namely the importance of high speed connections. This is not evident as a central theme in the current consultation and the importance of upload speeds for Cloud service development is entirely absent.

Q11-13. Answer is NO.

Section Clouds for users

Section Legislative Standards.

Section Interoperability

Question 3

The FTTH Council feels that a central theme is missing in the consultation; namely the importance of high speed connections. This is not evident as a central theme in the current consultation. In terms of interoperability, if some parts of Europe are developing services for delivery in the presence of FTTH networks but such services cannot be used or delivered because of capacity constraints, this will act as a major barrier to the internal market. A particular concern for the FTTH Council is the absence of upload speeds in most targets being set at EU level. The presence of networks which can support viable two way speeds can be a key enabler of Cloud services. Even basic Cloud service such as data storage is massively constrained by the current networks available. Amazon has a basic offer to their users which gives data storage which can be used for network back-up. However, with an average connection a 5GB back-up will take approximately 12hours rather than 10 minutes on a 100Mbps fibre connection. The viability of such a basic service will depend on such differences. Upload speeds will be even more important in the context of real time high capacity data applications that reside in the Cloud. This perspective is supported by an established body of work¹ which has shown over time that much of the benefits of ICT investments come not from the investments themselves, but from firms and industries ability

¹ 'FOR A GROWING EUROPE Making the EU Economic System Deliver' Report of an Independent High-Level Study Group established on the initiative of the President of the European Commission, André Sapir *et al.* July 2003.

'Catching Up or Getting Stuck? Europe's Troubles to Exploit ICT's Productivity Potential', Bart van Ark and Robert Inklaar, July 2005

to reorganise their means of production around these new technologies. The implications for economic systems are that the manner in which services are delivered in many areas may need to be completely rethought.

Other research shows that the economic and societal benefits of very high speed internet access (particularly high upload speeds)², and that the availability of such connectivity, changes the way consumers react to the internet. One of the biggest functional differences between FTTH and DSL options is the potential upload speeds. The many business cases put forward by different analysts rely on a variety of services which require radically different upload speeds. Key Cloud services such as IaaS, SaaS and so on require upload speeds if their potential is to be realised. The indirect benefits in terms of service development and the efficient allocation of resources at a time of rising demand is clear but is unlikely to factor in private investor considerations.

However, the FTTH Council is concerned that all of the enabling activities currently identified as priorities in this consultation document will have a relatively limited application unless and until the required and essential basic infrastructures are in place.

This is why the FTTH Council fully endorses the statement at the start of the consultation document which notes that the use of Cloud computing represents a paradigm shift. The FTTH Council believes that any such paradigm needs to clearly incorporate the functionality of FTTH and recognise the indirect benefits that such networks can enable in this sector. The network targets of the Commission set out in the Digital Agenda, seeing a 50% subscription to networks delivering 100Mbps+, implies an availability of such networks that will be close to ubiquitous. The Commission in its Cloud strategy needs to support and anticipate the availability of these networks in their forward looking policy framework. These very high speed networks can enable a set of services which are capable of completely changing certain aspects of service delivery in a range of areas from healthcare delivery to SaaS.

There are many other enablers that are very correctly identified by the Commission in its consultation document concerning data protection and the legislative framework governing such service delivery. The FTTH Council endorses these measures and believes that increasing interoperability, cross border legal regimes and legal certainty for users, and R&D are all clear enablers of a future Cloud environment in Europe. Nevertheless, without the underlying infrastructures in place, these measures will have limited impact in practice and that is why the FTTH Council believes it is critical that all parts of the Commission coordinate to highlight the overall benefit that FTTH networks can bring in a range of areas.

² See for example, http://www.ftthcouncil.eu/documents/studies/Socio-Economics_Study.pdf

Section on Public Sector Clouds.

The FTTH Council believes that if all those areas which can benefit directly (through services development and industry growth) as well as indirectly (economic externalities) through such FTTH networks are systematically identified then the case for investment in these networks becomes compelling and the Digital Agenda and EU2020 targets have a possibility of being met. Right now, industry is expecting the production of broadband plans by Member States to set a path to achieve the Digital Agenda targets as called for in the Commissions Communication on broadband in September 2010. That Communication also calls for an assessment of those plans to judge whether they are credible and whether sufficient resources are being allocated.

In the current financial and economic climate, the justification for such investments, which will in part need support from public finances, must compete with other possible investment areas. However, unless each area realises and highlights the benefits that such networks can deliver to their area, the funding may continue to be directed to other areas such as transport and energy networks which have traditionally absorbed far more than the approximately 4% of European Structural funds currently directed at ICT.

The FTTH Council firmly believes that all sectors need to make the networks which support these innovative Cloud services a priority.

The need for a co-ordinated approach to support FTTH network deployments

The public sector needs to lead by example in terms of the development of Cloud services. The FTTH Council believes that very high speed and reliable FTTH networks can be deployed at lower cost if non-replicable infrastructure is shared as much as possible (ducts, trenches, the drop fibre including in-building wiring etc.). Much of the co-ordination work that is necessary to enable effective sharing of passive infrastructures needs to happen now, ahead of network deployment, and can only be done by public sector bodies. While public bodies have a significant role to play, in order to co-ordinate investors and to give a clear understanding when and where the market will rely on competing infrastructures, where it will be a single commercially deployed infrastructure and where public finance may be available, the FTTH Council believe that they are only likely to act when key beneficiaries of these networks are prepared to call for such measures.

There are two rationales supporting the need for fibre to the home (FTTH) deployments as the mass market solution in Europe. The first concerns direct demand and direct effects that having such networks would have.

A recent study by Ovum for the FTTH Council looking at the socio-economic benefits of fibre found that the provision of fibre at a municipal level is regarded as having positive benefits on health, education and other public services many of which will be delivered via the Cloud. These benefits range from reduced telecom costs to more efficient and new services. This is particularly true in rural areas where limited resources and distance are barriers to service quality.

There is also a strong belief reported that there are a number of indirect benefits derived from fibre rollout. While this is particularly true in more isolated areas where end-users face significant travel requirements and even more pronounced inability to engage with others and consume public services off-line, it is also true of spill over benefits in urban areas where web hosted services evolve in a virtuous circle of development.

In terms of usage, the study found that users largely consumed the same services and used fibre in much the same way, but importantly, users of fibre used much more of these services. For instance, those tending to work from home spent over 20% more time working from home once they had upgraded to fibre. Similarly, users of education, eHealth, and eGovernment all increased usage once they had migrated to fibre.

Today governments want to reap the financial and social benefits of the Cloud. Many, however, have yet to facilitate the construction of the FTTH infrastructure on which the delivery of Cloud services will depend. The direct benefits of FTTH investments are recognised by private investors; but so far public authorities have not acted decisively to capture the indirect benefits that such networks can bring.

Q3 Government leading the way.

While the public sector needs to completely rethink the organisation of public service delivery organised around new technologies and delivery platforms, it also needs to form part of a much broader plan (national plans) which needs joined up thinking across a large number of service areas. Use of the Cloud to enable such service delivery is critical to achieving key development targets in a range of areas. As noted already, exploiting the Cloud requires adequate networks to be in place in order to have sufficient capacity so that its potential can be reached.

These networks will take considerable time and resources to build and while Europe needs more efficient service delivery now, other industrial policy motivations should also be considered.

If Europe's competitors in other parts of the world have fibre and Europe does not, where are Cloud solutions and applications likely to be developed if not where the supporting infrastructures are available? Experience to date suggests that applications will be developed where the network capable of supporting service delivery is available. Once developed, those

firms and research centres that lead the way are likely to maintain their lead if developments in other areas of ICT are to be our guide.

The Commission in its Cloud strategy needs to support and anticipate the availability of these networks in their forward looking policy framework. These very high speed networks can enable a set of services which are capable of completely changing Cloud based service delivery.

The FTTH Council believe that FTTH testing environments ought to be available to researchers and developers in order to ensure that those developing the advanced and innovative Cloud products are able to work in the appropriate environment.

To date, the presumption has been that a market driven business case for FTTH deployments is likely to emerge in more densely populated areas as deployment costs will be lower and incomes higher. The inference is that recognition of the spill over benefits or positive economic externalities of FTTH networks will be more important in justifying the public investment that will be required in less densely populated areas.

The FTTH Council believes that Governments should now finance at least one significant rural area FTTH roll-out so that there is a test bed available to trial new Cloud services and for Member States to monitor usage and impact so that more robust cost-benefit studies of high capacity networks can be undertaken. This would allow those Member States to link areas of service development to network build to rural area and use this as a basis to monitor the benefits that both Cloud and high speed networks can bring.

Indeed, if the presumed investments in more densely populated areas fail to materialise, recognition of these externalities will be more important and would have a much broader application.

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