Next Generation Broadband Infrastructure - The Case for Broader Public Sector Intervention

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Background

The UK Government has publicly stated a goal for the UK to have the best broadband infrastructure in Europe by 2015. As a result Broadband Delivery UK (BDUK) - a team within Department for Culture, Media and Sport (DCMS) was set up to deliver the Government's broadband strategy, bringing enhanced broadband services to all parts of the UK. BDUK is distributing £530m of funding to bring improved broadband connectivity to UK homes and businesses which will not be served by the commercial market. The strategy builds on the Digital Britain report of 2009 which stated that market forces would address the broadband requirements of two thirds of the nation but there was a need for public intervention in the 'final third' where market forces are unlikely to be able to justify investment on a commercial basis. To date a number of local authorities have already received funding with the focus being on rural initiatives.

The Problem

The belief that market forces will deliver adequate services to two thirds of the market is highly questionable and there is evidence of gaps which also need public support and intervention.

It is certainly true that both BT and Virgin Media are stepping up the rate of deployment. However the investment required to provide next generation broadband services across the country is many £billions. BT and other carriers need to phase roll out in accordance with their financial constraints and commercial considerations. Investment has tended to go to those areas where there is intense competition and a concentration of large businesses - often in major city centre locations. However many cities and towns across the country are not receiving the market driven investment by the telecommunications industry that the Digital Britain report and UK government policy assumes. They fall between two stools - not served by the market and falling outside the Government's policy for assistance.

Market segments impacted in this manner include:

- businesses in urban areas who are located outside the central business districts. For example large areas of even the largest conurbations such as London and Birmingham do not have access to superfast broadband services
- many small and medium sized businesses in urban areas are using basic ADSL services and often experience low speeds due to contention. It is not untypical to receive <7Mbps even in major urban conurbations - whereas research shows that they need up to 20-50Mbps symmetrical services to undertake applications such as video and image transfer and file sharing
- urban areas in need of regeneration are not receiving investment and are caught in a cycle that needs to be broken.

Even in those areas which are lucky enough to be in the footprint of BT's investment programme often receive a gap between their true requirement and the services being deployed. With BT’s Fibre to the cabinet (FTTC) solution, fibre is extended from the exchange to the cabinet, and the DSLAMs are fitted in the cabinet rather than the exchange, so much depends on where the cabinets are in relation to the business site. Theoretically sites within 300m cable length (not straight line physical distance) of a cabinet could receive an asymmetric 100Mbps download speed but beyond 300m from a cabinet the speeds fall rapidly to 10Mbps at 2km from the cabinet. Upload speeds are significantly less which is particular critical for many businesses in knowledge based sectors. The result of the above is that many businesses do not receive, or cannot afford, access to high speed broadband services that they require to compete effectively in a world market. This is harming competitiveness and employment.

A Change in Policy?

A number of UK cities have sought to address this problem through their own initiatives to build state of the art next generation infrastructure (eg Birmingham & Manchester). However it is challenging for urban areas to attract public funding due to the mistaken belief that the market will address their needs. However if we look at the recent analysis by Ofcom of superfast broadband coverage in the UK in terms of the NUMBER (rather than %) of sites not served by superfast services it actually shows the problem is great in urban areas. A small percentage of a major urban area lacking access to superfast broadband services is often a larger absolute number than a high % of a less densely populated area!

As a result Government policy and associated funding needs to be focussed on improving broadband capability across the country as a whole. There are areas of market failure in even the most urban areas and it is key that these are bridged if the UK it to retain its competitiveness and truly achieve the goal of having one of the best broadband infrastructures in Europe.