

ITAnalysis - More fibre in the diet keeps businesses going?

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If there has been any early benefit for business users from the UK Government's launch of the Digital Britain paper in 2009, it has been the apparently stimulating effect it has had on the enthusiasm of carriers for providing services over fibre.

For some of the larger players, BT in particular, this has been more like a Frankenstein lightning bolt than a gentle prod. Where once established networking companies talked of 'providing high speed broadband if there is sufficient demand', there are now more blanket coverage statements.

This is odd as there really wasn't anything in the bill that directly and significantly targeted business use, but the reaction in the media and among smaller players across the industry seems to have woken the apparently slumbering giants. Delivering universal broadband now seems to have some urgency.

It is not only coverage where commitments are being made, but also in service levels. More bandwidth is being offered, with larger usage allowances and guaranteed speed or capacity. This is vital as companies are reliant on their digital connectivity – to drive commerce and communications, i.e. it is not just broadband as a nice to have internet access mechanism.

This also changes the requirements for another aspect of broadband performance – upload speed. The more a data connection is used for general communications – telephony, application sharing, conferencing, video – the greater the need for symmetric bandwidth capacity, where download and upload speeds are the same.

Fibre right to the premises can make it much easier to deliver such performance. There is a fair amount of fibre already present, from former cable companies, past and current network operator investments and even social enterprises (not for profit, but not public sector) extending the patchwork quilt into rural areas.

But a major problem with fibre is that its reach is not nearly as widespread as copper. Unfortunately the largest element of the cost of providing fibre is not the glass tube or the clever 'photonic hardware' that drives light through it, but the cost of laying it in trenches underground.

Not all companies have the luxury of fibre passing by in the street, however there are a number of alternative ways to extend the reach of broadband. These range from point-to-point microwave links, and improved range and bandwidth in wireless technologies such as WiMAX to cellular network revisions such as Long Term Evolution (LTE). There are even faster satellite data services which have become relatively affordable due to the digitization of satellite communication systems, the ability to control and deliver 'beams' of capacity to the ground and lower cost, mass produced 'modems', thanks in some part to the TV industry.

While many of the alternatives, especially wireless systems will deliver a certain level of capacity that probably meets or will meet most of today's needs, they will quickly be outgrown, and they themselves place greater demands on their 'backhaul' infrastructure – which is typically fibre. Ed Zander, at Sun Microsystems back in 1998 famously said "don't bet against bandwidth", meaning both the appetite to consume, and need to supply more. These appetites and needs show no signs of diminishing.

That appetite for capacity now comes from unexpected quarters. Despite recent growth in the use of high definition video and telepresence, there is no single bandwidth intensive, killer application that hogs all available capacity.

Quite a lot of the new demand for network capacity is being driven by laptops with 3G 'dongles' and devices like the Apple iPhone that have changed mobile behavior, just as low cost ADSL broadband changed domestic computer behaviour.

Almost all applications **expect** constant network connectivity, and are typically 'chatty' in their use of it. So too do users **expect** to be able to connect at all times even for the slightest need that could be met without connection (for example using Google to check spelling or look up an acronym). These are not killer apps, but form a killer cocktail of usage that individuals and organizations have come to rely on. Demand to extend fast broadband connections has not come from growth of a single predictable or orchestrated need, but a vast cacophony of uses.

Finally telecoms providers and politicians are waking up to the value of universal high speed connectivity, now they need to take a more creative approach to weaving together the patchwork quilt. This means introducing alternative investment models - not phone taxes, but public/private combinations through social enterprises and metropolitan partnerships.

This does not require off balance sheet style debt, like many PFI projects, but a more social and public sector view of return on investment, i.e. over a longer period and combining different public sector budgets. It also means dealing more strategically with precious wireless spectrum, instead of treating simply as an asset to tactically sell off to the highest bidders.

The washup washout of the digital bill hurried through at the end of the last UK parliament to the frustration of many in the industry shows that there is still some work to be done to ensure the right steps are taken by government and regulators. This is not just about supplying broadband capacity so that individuals can consume more online media, but about turning the patchwork broadband quilt into a ubiquitous commercial, social and educational blanket - no longer information superhighway, but information supermarket.

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Through researching perceptions, Quocirca uncovers the real hurdles to technology adoption – the personal and political aspects of an organisation's environment and the pressures of the need for demonstrable business value in any implementation. This capability to uncover and report back on the end-user perceptions in the market enables Quocirca to advise on the realities of technology adoption, not the promises.

Quocirca research is always pragmatic, business orientated and conducted in the context of the bigger picture. ITC has the ability to transform businesses and the processes that drive them, but often fails to do so. Quocirca's mission is to help organisations improve their success rate in process enablement through better levels of understanding and the adoption of the correct technologies at the correct time.

Quocirca has a pro-active primary research programme, regularly surveying users, purchasers and resellers of ITC products and services on emerging, evolving and maturing technologies. Over time, Quocirca has built a picture of long term investment trends, providing invaluable information for the whole of the ITC community.

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