

Superfast Cornwall research into the impacts of superfast broadband



Introduction

The following summary presents research carried out on behalf of the Superfast Cornwall Programme. It includes the mid-term evaluation, a quantitative study undertaken by SERIO (Plymouth University) and Buckman Associates, which provides an independent assessment of the impacts of superfast broadband.

A qualitative study was also undertaken by Plymouth University Business School and BT Research, looking at SMEs that have adopted superfast broadband. The study investigated the impacts of the technology and provides in-depth commentary around businesses' experience of superfast broadband.

In addition, a student from Exeter University Business School carried out research for their dissertation for the One Planet MBA. The aim of this research was to investigate the intentions, experiences and outcomes of Cornish SMEs that have a superfast broadband connection for more than 12 months.

Together the research provides an early indication that Cornwall's new fibre superfast broadband network is already providing a major economic boost to SMEs.

Superfast Cornwall Programme

Superfast Cornwall is bringing fibre broadband to Cornwall and the Isles of Scilly to make them two of the best connected places in the world.

Funded by the European Union, BT and Cornwall Council, and managed by Cornwall Development Company, Superfast Cornwall will improve the lives of the people of Cornwall and the Isles of Scilly, giving a much needed boost to the economy. Learning, playing and working will be transformed, encouraging innovation amongst the region's businesses.

Running until 2015, Superfast Cornwall will bring fibre optic broadband to 95% of homes and businesses in Cornwall and the Isles of Scilly, with the remaining 5% enjoying faster broadband speeds thanks to alternative technologies, such as satellite. There will be more of the 'Fibre to the Premises' technology, which makes superfast broadband, extra superfast! Cornwall is one of the very first places in the UK where this cutting edge technology will be so widely available.

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Superfast Cornwall Evaluation: Mid-term Evaluation Key Findings - SERIO (Plymouth University) with Buckman Associates

About the Evaluation

A team led by SERIO¹ and including experts from across Plymouth University, in collaboration with Buckman Associates, are working with the Cornwall Development Company (CDC) to provide an independent assessment of the impact of Superfast Cornwall. Following the preparation of a baseline report in 2011, SERIO and Buckman Associates recently completed work on the project's midterm evaluation.

As part of the midterm evaluation, SERIO and Buckman Associates analysed the available survey data, including that gathered through a telephone survey of businesses that had been connected to superfast broadband for 12 months or longer. This survey provides a core part of our evidence as it captures information on the economic impact of superfast broadband on businesses. The survey is conducted at regular intervals and will continue throughout the duration of the Superfast Cornwall project. At the time of the midterm report, 88 businesses who had been connected to superfast broadband for 12 months or longer had been surveyed.

The survey sample was drawn from those postcodes where superfast broadband was available to at least 50% of the premises. Based on CDC's estimated number of businesses connected at 19 April 2012² (756³), this represents 11.6% of the total connected businesses (confidence interval⁴ +/- 9.83 at 95% confidence level).^{5,6} At this stage, all reported data must be interpreted as providing an important insight into business use of superfast and its impact, rather than a precise estimate of impact. This survey is conducted quarterly, and as the roll out of superfast broadband continues throughout the remainder of the project, the number of connected businesses available to survey in each subsequent wave will increase. As such, it is anticipated that the total sample size at the time of the final evaluation will enable a fuller and more complete analysis of impact.

Business Survey Findings

Survey respondents were asked to indicate the extent to which they agreed or disagreed with a series of statements about the impact that superfast broadband had on their business. The responses were as follows:

- 82.9% (73) indicated that superfast broadband had saved their business time and/or money (34.1% (30) slightly agreed and 48.9% (43) strongly agreed with this statement);
- 57.9% felt that it had enabled their business to grow (32.9% (29) slightly agreed and 25.0% (22) strongly agreed);
- It allowed 61.4% (54) to work in new and different ways (20.5% (18) slightly agreed and 40.9% (36) strongly agreed with this statement);
- The impact on businesses in terms of the generation of new sales, contracts or customers, and the development of new goods or services was more mixed, with similar proportions agreeing and disagreeing with these statements. Where new sales were reported (33), over a third of sales were to national customers (36.4% (12),

24.2% (8) to international customers, 21.2% (7) in Cornwall and 15.1% (5) in the South West.

Supporting the extent of agreement with these statements, over three quarters (79.5%, 70) of businesses stated that overall superfast broadband had been beneficial to their businesses. However, the results show that business need for faster broadband was one of the most frequent reasons for connecting. It is possible, that these survey results may be biased towards those businesses that have been waiting with anticipation for a superfast connection and therefore were some of the first to sign up.

The business survey explored the economic impact of superfast broadband on businesses in a number of other ways. The survey captured key economic metrics including changes in employee numbers. Almost two thirds of connected businesses (63.6%, 56) reported that employee numbers were the same at the time of the survey as they were two years ago, with 23.9% (21) reporting an increase and 5.7% (5) a decrease in employees. A total of seven connected businesses attributed at least a proportion of the increase in employee numbers to superfast broadband. The cited reasons for the jobs gained included:

- Increase in sales and efficiency
- The upgrade has enabled them to access wider markets so therefore need new staff to keep up with the workload
- We can process more work so therefore need more people

Over a fifth (20.5%, 18) of businesses safeguarded jobs⁷ as a result of connecting to superfast broadband. Therefore, over a quarter (26.1%, 23) of connected businesses completing the survey attributed either creating or safeguarding a job to superfast broadband.

It also must be noted that job losses (although at a much lower number) were also reported as a result of connecting to superfast, with two businesses attributing the increased productivity achieved after upgrading to superfast broadband to redundancies.

What does this mean?

Although the sample size is relatively small and made up of those businesses that signed up quickly to superfast ('early adopters'), a significant proportion of businesses are reporting that superfast broadband has enabled them to create and safeguard jobs. It is therefore evident that the project has already had a positive effect on Cornwall's economy.

In terms of the time frame in which these benefits have been achieved, over three quarters of those who reported creating or safeguarding a job (18, 78.3%) had been connected for between 12 and 18 months, and five (21.7%) for longer than 18 months, therefore indicating that superfast broadband can lead to job creation soon after connection. Furthermore, a small proportion of those that had already created jobs indicated that they expected to employ more people in the future because of superfast broadband, indicating that its impacts may not be limited to the short term.

Summary of SME Benefits and Business Opportunities with Superfast Broadband: the Virtuous Circle of Connectivity Plymouth University Business School and BT Research

This research is the second phase of a two-part qualitative study of Cornwall's SMEs before and after the introduction of Superfast Broadband (SFBB). The report presents the findings of in-depth research conducted with a sector-representative sample of local SMEs from 46 businesses based in Cornwall who had signed up for and used SFBB for between 6 and 12 months. The qualitative nature of the study provides an authentic vox populi giving texture and granularity to the credibility of a companion quantitative study undertaken by SERIO; together these works are the first to describe the economic, social and environmental impact of SFBB on the SME community.

- Participants perceived the change from broadband to SFBB as very much like the change from dial-up to ADSL - a real step change that makes SFBB a 'must have.'

"...it was like the sun had opened up, you know, it was amazing." Retail

- Access to fast, reliable broadband is fundamental to running a business efficiently; working patterns and business practices are dictated by effective broadband connectivity and SFBB is delivering a first class product:

"The connectivity and the reliability of it has been excellent, it's always there, whenever I need it." Education and training

- SFBB is serving SMEs well and has become a critical enabler for many; it is changing the way businesses operate, increasing agility and productivity in new and novel ways:

"The exciting thing for me it has made my business model and what I plan to do completely different, I will be able to widen it to a much larger operation than I would have because I can communicate with more and more people. Potentially my business could be ten times bigger than it is now, probably more." Accountancy

- SFBB is driving efficiencies and savings and helping SMEs to achieve their ambition of creating new opportunities for growth:

"It allows you to do things that you could never count on doing before. There are the eureka moments when you look at something and think, well perhaps I could do it in a different way, and you find you can do it in a different way because you have got Superfast Broadband." Architecture

- The increased potential for business growth that SFBB affords is a strong driver for adoption. Different ways of working made possible with SFBB result in the development of new products and services, business diversification and enhancement, new revenue streams, a broader customer base, greater control and improved competitiveness. Participants had already started to exploit the benefits of SFBB and felt it had exceeded their expectations.

"It's so much more effective, decisions made, deal done, productivity up." Retail

- SFBB has a pivotal role in delivering value through new found efficiencies and savings. Use of Cloud services and Skype communication for business are emerging as major positive game changers as a result of SFBB and are having an impact on carbon footprint. Cloud technology offers a fundamentally different way for SMEs to harness computational power, storage capacity and services and is boosting innovation as a result:

"It's made working with Cloud services a lot more possible, if you're using the Cloud you need it to be fast or it's a waste of time, we're using those services all the time now, there's no delays, it's very good." Publishing

- The ability to use Skype is providing SMEs with increased and better collaboration opportunities across a wider field of expertise, a reduced need to travel, and is more time efficient:

"Being able to be here in the South West and not having to travel to see sales or look at X-rays and things like that... I watched the sale of a horse overnight in Australia and seeing the horse go in and being able to talk to people there was marvellous...it works in terms of a modern business for me. It's win-win in terms of lower telephony charges, lower transport costs, lower overheads." Land-based services

- SMEs have become far more reliant on fibre connectivity than they were on regular broadband. SFBB is not just an improved way of working; it is a different way of working:

"You are more reliant on Superfast Broadband than you were on regular broadband, without a doubt... you can do things now you'd never even considered before.... "The way I work is all about collaboration with all sorts of people across the world which I could not have done before, so it is a new way of working really, as opposed to an improved way of working." Management consultancy

- Fibre infrastructure is particularly important in rural areas and has the potential to overcome other shortcomings in road, rail and air infrastructure that hamper business operations. Historically Cornwall has experienced high levels of outward migration of those between the ages of 16 and 29⁸ but SFBB creates the opportunity for regeneration, attracting a younger population as well as stimulating the return of those who have left in search of better-paid employment:

"I was born here and I love it and I'm lucky enough to have a business here but from when I was 18, I didn't know anybody, none of my friends stayed in Cornwall. They all left but they are coming back now they are in their 30s and 40s. They sort of all left and now they are coming back with different skills and setting up their own businesses and things like that." Tourism and hospitality

- Before SMEs had access to SFBB many reported a shift from operating online to offline (e.g. sending large files by courier rather than electronically) to accommodate poor connectivity in rural locations. Fibre connectivity has reversed this shift and participants reported being able to accomplish more of their business operations online and to greater effect:

"Before I would have to put files on a disc and get them couriered up to London, it was the only way...now I just send them and whoosh, they're gone, job done!" Publishing

- SFBB fosters greater use of social networking sites for business enabling collaboration beyond the boundaries of business premises, helping build better relationships with both suppliers and customers:

"For most industry I kind of think that Facebook and Twitter is essential for helping you build your brand nowadays... and letting people know what's going on, trying to attract them...you build a kind of following as well." Tourism and hospitality

... continued over

¹ SERIO is an applied social, economic and market research unit based at Plymouth University.

² And will therefore have been potentially connected for 12 months or longer at the time of the fieldwork.

³ This is based on the assumption that 12% of the total premises in Cornwall and the Isles of Scilly are business premises.

⁴ A confidence interval (the margin of error) describes the level of accuracy of the survey findings.

⁵ It was originally anticipated that a random sample of businesses in connected areas would be invited to participate in the survey. However, given the relatively low numbers of businesses connected for over 12 months at this stage of the project, the agency commissioned by CDC to carry out the data collection (Marketing Means) were provided with a list of connected businesses to boost the response rate. 38.6% (34) of the sample was therefore collected via targeted recruitment.

⁶ A sample size of 255 was required for the results to be accurate within 5 percentage points.

⁷ Jobs that were at risk of being lost.

⁸ <http://www.cornwall.gov.uk/default.aspx?page=22832>

- Technological innovation has led to more services and more people owning more devices that all require bandwidth. The ability to connect more people and multiple devices through SFBB without compromising quality of service or speed of operation is a valuable asset to business.

“Increasingly I get clients walking into the office with smart phones and we’ve got an open hub so they can just pick up their emails while they’re sitting in our office. It’s not even a service we thought of offering before, well we couldn’t, but now, well, it’s just there. Clients come in with a laptop and expect to be able to plug it in and bang, there’s the Internet. We couldn’t have done that before, we were struggling ourselves.” Management consultancy

- Cornwall has a growing graduate population, rich in talents that can be beneficial to business and many graduates choose to stay, having completed their degree. Graduates’ ability to find well-paid jobs in the region is influenced by the kind of economic growth fostered by better connectivity:

“My whole life has been, even from when I was at school in Truro, wanting to stay in Cornwall so it’s helped me to stay here, I haven’t had to go elsewhere, my reach is bigger than it was before.” Architecture

We have uncovered a virtuous circle of connectivity through a chain of interdependent benefits that make SFBB a ‘must have,’ not just for the greater productivity and efficiency gains it currently provides but for different and improved ways of working and conducting business. The benefits SFBB affords have become so important to SMEs they have become far more reliant on fibre connectivity than they were on regular broadband. As SME reliance on those benefits grows it increases and reinforces their value, new dependencies are forged and a new set of innovations and benefits emerge that are used to even greater effect.

Summary of an exploratory study on Small to Medium-sized Enterprises’ (SMEs) intentions, experiences, and outcomes of adopting Superfast Broadband in Cornwall

Exeter University Business School – One Planet MBA

The aim of this research was to investigate the intentions, experiences and outcomes of Cornish SMEs that have a superfast broadband (SFBB) connection. The research was carried out by semi-structured interviews with 12 SMEs from a range of sectors that have had a SFBB connection for at least 12 months. The study adds to value to the accompanying quantitative study undertaken by SERIO and the qualitative focus group research.

The key findings are:

- Before connecting to SFBB, the majority of the SMEs recognised that there was potential benefit to their business if a faster and more reliable Internet access was available to them compared with their previous ADSL technology based Internet access.
- Three SMEs were influenced by the availability of SFBB in Cornwall in making the decision to relocate their businesses from other counties in the UK.

- Most of the SMEs saw improvements to their operations through a combination of higher productivity, reduced costs and employment creation within Cornwall. Productivity improvements were estimated at between 10-20% based on the SME’s own judgement. The reasons given by the SMEs for their improved productivity included ability to work concurrently, improvement in staff morale, ability to access information remotely, quicker access to and processing of information, ability to make productive use of ‘dead’ time, reduced travel time and better communication.
- Two SMEs believed that SFBB has enabled them to experiment with innovation in anticipation of future customer or market needs changing, for example, by developing web based services. All of the SMEs acknowledged that whilst SFBB contributed to these operational improvements, the outcomes would not been met unless SFBB was part of a series of other activities, initiatives, and investments undertaken by them.
- Similarly, the vast majority of the SMEs have been able to improve customer relationships through the ability to respond faster, communicate better through more interaction via video conferencing and other means of internet-based collaboration, reach and attract new customers through internet based communication and promotion, and provide new services.
- Some have improved supplier relationships, and whilst collaborating does not feature highly amongst these SMEs, there was a greater awareness and a lower barrier to experiment.
- The SMEs believed if support to exploit SFBB was available from trusted sources and delivered in a suitable format, it would be valued and enable further growth. The type of support expressed as valuable by the SMEs included: provision of information, advice, and consultancy services. The subject matter for this support cited by the SMEs as being valuable was: Internet services, business strategy and planning, and IT.
- The vast majority of the SMEs believed that the adoption of SFBB has brought opportunities to them. Seven of the SMEs cited that new markets were accessed without significant increase in costs. Additionally, two of the SMEs cited that SFBB enabled innovation.

SMEs in Cornwall that have been connected to SFBB for at least 12 months are improving their operations through increased productivity, job creation, reduced costs and the ability to innovate. Several SMEs re-located to Cornwall because of the SFBB infrastructure. The opportunities brought about through the adoption of SFBB included accessing new markets and innovation.

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