

# Superfast Cornwall

## Longitudinal Business Survey

### Wave One Final Report

April 2014



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The SERIO logo icon, which consists of a circle containing three stylized human figures in white and orange.

# Superfast Cornwall

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### Wave One Final Report

April 2014

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# Superfast Cornwall Longitudinal Business Survey Wave One

## Executive Summary

### Introduction

- The Next Generation Broadband Infrastructure project, known as Superfast Cornwall, aims to make fast, fibre based broadband available to at least 95% of premises in Cornwall by the end of 2014. A total of £132m has been invested in the roll out project, making it the largest single Convergence investment. The project aims to leave a real economic transformation and long term legacy for Cornwall and the Isles of Scilly.
- SERIO, based at Plymouth University, has been commissioned to undertake a longitudinal business survey amongst connected businesses to explore the economic, social and environmental impact of superfast broadband in more detail. The survey involves undertaking two waves of research with approximately 50 businesses who have been connected to superfast broadband for at least six months at the first point of contact. This report provides an overview of the key findings emerging following the first wave of interviews which took place throughout February and March 2014. The second wave of interviews will be undertaken with the same businesses during a similar timeframe in 2015.

### Approach

- The longitudinal business survey was carefully designed in order to capture more detailed information than that already captured through the quarterly business survey. In order to capture the quantitative data required, as well as drilling down to the more detailed qualitative elements, the survey was a mixture of open and closed questions. The survey was completed over the telephone and took approximately 30 minutes to complete.
- The survey sample was based on separate lists of connected businesses provided by CDC which included quarterly business survey (QBS) respondents who participated in waves 1 to 3 and gave permission to be contacted again, web survey respondents, case study respondents and a list of connected businesses. The first wave of the longitudinal survey was conducted with 63 businesses in total in anticipation that some of these businesses may be lost through survey attrition by the time of the second wave.

### Business Use and Perceived Benefits of Superfast Broadband

- Between 17% and 33% of businesses indicated that they had used various internet functions for the first time since upgrading to superfast, with sending and receiving large files (33%), cloud computing (24%), web conferencing (24%) and virtual private networks (24%) being the functions that were most likely to be used for the first time since upgrading. Between 44% and 78% of businesses had used each of the explored functions before upgrading their connection, however usage had increased since upgrading and this was most pronounced for internet telephony and video conferencing.
- The data indicated that usage amongst businesses that had previously participated in the QBS wave 1 (Autumn 2012) and wave 2 (Spring 2013) showed a marked increase across all functions when comparing pre-superfast usage and usage at the time of the QBS interview, but usage had generally plateaued since participating in the QBS,

suggesting that the most significant changes in usage occur soon after connecting to superfast but that these changes are sustained over the long term by businesses.

- A number of connected businesses were making use of electronic processes and systems (online marketing, online sales, and logistics and supply chain functions), with between 38% and 50% reporting using each of these functions more frequently as a result of upgrading.
- To add more insight to the findings, respondents to the longitudinal survey that used these functions more frequently since upgrading were asked to indicate how this has benefitted their business, if at all. The key benefits mentioned focused on efficiency and time savings as a result of superfast broadband, which potentially could lead to increased productivity.

### **Environmental and Social Impacts of Superfast Broadband**

- The data suggests that superfast has had more of a positive impact on businesses' travel usage than premises energy use. For the majority of businesses (75%) the energy use of their business premises had not changed since connecting to superfast, while 47% felt their travel usage had reduced, and this was generally as a result of utilising more sophisticated internet functions.
- A particular aim of the longitudinal business survey was to explore any social impacts brought about as a result of businesses upgrading to superfast broadband, particularly around the impact of home-working opportunities for disabled employees, those with caring responsibilities and employees living in remote locations. Respondents indicating that upgrading their connection had enabled themselves or employees to work from home were specifically asked if they felt that superfast broadband makes it easier for businesses to attract, retain and professionally develop employees from these groups. Overall over three-fifths of respondents (63%, n=24) felt that it does. A small proportion of businesses (n=5) indicated that superfast broadband had already enabled their business to benefit employees from at least one of these groups.

### **Skills Levels and Training Needs**

- The majority of businesses indicated that the IT related skills levels of themselves and their employees were satisfactory, with just 14 businesses feeling their skills were inadequate and should be improved and a further 7 identifying that, whilst their skills levels were adequate, there was potential for improvement. The most common skills requirement mentioned was basic IT skills. A small minority (26%) of businesses indicated that their business would benefit from training to help them further exploit superfast broadband.

### **Exploiting Superfast Broadband**

- Just over two-fifths of businesses (43%, n=27) indicated that they had engaged in collaborative working since connecting to superfast broadband, with 11 of these indicating that superfast had either had a significant impact in enabling these collaborations or that superfast had made it easier.
- Close to three fifths of respondents (62%) did feel there were opportunities for business innovation linked to the availability of superfast broadband and, looking to the future,

over half of businesses (n=32) indicated that they were looking to further exploit superfast broadband.

## Influence of Superfast Broadband

- The availability of superfast broadband in Cornwall had influenced two businesses that participated in the longitudinal study to either establish their business or relocate the business to Cornwall. One participating business indicated that connecting to superfast broadband was 'very influential' in their decision to set up the business and one indicated that the availability of superfast broadband was a 'very important' factor in their decision to relocate the business to Cornwall.

## The Economic Impact of Superfast Broadband

- As with the QBS, the longitudinal business survey explored the economic impact of superfast broadband on businesses. Businesses were invited to provide economic metrics, including financial accounts information and changes in employee numbers, which was then used to estimate the Gross Value Added (GVA).
- The majority of businesses (n=36) reported that employee numbers (for ERDF eligible jobs) were the same at the time of the survey as they were before connecting to superfast broadband, with 21 reporting an increase and 6 a decrease. In order to estimate how much of this change in employee numbers could be attributed to superfast broadband, businesses were asked to estimate how many employees they would currently have in the absence of superfast. 44 businesses felt that their employee numbers would be the same, while 12 felt they would be lower and 2 that they would be higher. The 14 businesses which felt their employee numbers would be different without superfast reported an aggregate difference of 17.4 eligible FTE, of which 11.4 eligible FTE was jobs created and 6 eligible FTE was jobs safeguarded.
- Of the 63 businesses only 10 were able to provide complete GVA figures for all three components. However 30 businesses were able to provide figures for operating profit and employee costs, which usually make up the largest components of the GVA calculation. GVA increased by an estimated 94% since the 30 businesses connected to superfast broadband, from a cumulative total of £3.4 million to £6.6 million.
- The estimated attributable GVA came to a total of £444K, based on the figure for attributed FTE growth of 11.4. Similarly the figure for safeguarded GVA came to £257K based on 6 FTE safeguarded. These figures provide estimates of the economic impact which superfast had on these businesses operations in Cornwall.
- While attributable FTE and GVA provides a robust picture of the impact of superfast broadband on the businesses themselves, net FTE and GVA figures are required to consider the impact on the economy as a whole. The figure for net eligible FTE is 10.6 while the figure for net GVA is £424K and the figure for net eligible jobs safeguarded is estimated at 3.7 FTE, while net GVA safeguarded is £169K.
- While economic impact is usually assessed through job creation and safeguarding, labour productivity (the value produced per employee) is also an important measure of impact. GVA per FTE is a standard measure for labour productivity and was therefore calculated for each of the businesses which supplied GVA data. Of the 27 businesses which provided complete GVA and FTE data the average GVA per FTE figure before connecting to superfast was £28,422 increasing to £31,132 at the time of the survey

was, a rise of £2,710 or 9.5%. This suggests that labour productivity overall has increased since the businesses connected to superfast.

## Conclusions

- The findings presented in this report provide an indication of businesses current position with regards to the impacts superfast broadband brings to businesses, from which future comparisons will be drawn. The final section of the report draws some initial conclusions from the first wave of the longitudinal business survey.
- The findings highlight that superfast broadband is having an impact on the way businesses make use of the internet, with a significant proportion indicating they are making use of superfast broadband to access different internet functions for the first time, and the frequency with which businesses are using certain internet functions has increased as a result of upgrading to superfast broadband.
- Business consistently identified time and efficiency savings as the key ways in which superfast was benefitting the business, this included being able to carry out tasks quicker as a result of an upgraded connection and less travel time and costs as a result of virtual communication tools.
- While very few businesses felt superfast broadband was having a positive impact on the energy use of their business premises, almost half of businesses indicated that superfast broadband was having a positive impact on their travel usage. The majority of businesses agreed to some extent that superfast had potentially had an impact on employee wellbeing by enabling them to work remotely and/or more efficiently from home. A small proportion of businesses indicated that superfast had already enabled them to benefit employees either living in remote rural areas, those with caring responsibilities and those with mobility issues. It will be interesting to see how these impacts change and develop over the year.
- Despite only a small proportion of businesses identifying a need for training to help them further exploit superfast broadband, a number identified uncertainty around how they could fully exploit superfast. Given that some internet functions are not been utilised as much as they could be, it will be interesting to see if training requirements change over time if businesses adapt and find new ways to utilise the technology. The follow up survey should provide more insight into these changes.
- As already highlighted, this report provides a baseline position from which the journeys of businesses in using superfast will be compared, alongside how any impacts may have accrued or changed over time. The follow-up interviews will take place with the same businesses in early 2015, following which a final report will be produced which will explore these economic, social and environmental impacts of superfast broadband in more detail.

## Superfast Cornwall Longitudinal Business Survey

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## 1. Introduction

### 1.1 Background to the Research

The Next Generation Broadband Infrastructure project, known as Superfast Cornwall, aims to make fast, fibre based broadband available to at least 95% of premises in Cornwall by the end of 2014. With £53m of funding from the European Regional Development Fund (ERDF), alongside £78m of investment from BT, it is the largest single Convergence investment. The delivery of the Superfast Cornwall project is being managed by the Cornwall Development Company (CDC). The project aims to leave a real economic transformation and long term legacy for Cornwall and the Isles of Scilly. Results from the midterm evaluation<sup>1</sup> highlighted that the programme is making good progress towards its objectives, and the roll-out of the infrastructure is ahead of schedule. With economic impacts, in terms of creating and safeguarding jobs, and therefore boosting GVA, now starting to emerge, CDC identified an opportunity to explore the economic, social and environmental impact of superfast broadband on those businesses which are now connected in more detail. In December 2013 CDC commissioned SERIO to undertake a longitudinal business survey amongst businesses connected to superfast broadband to complement the ongoing survey activities.

### 1.2 The Longitudinal Business Survey

The longitudinal business survey involves undertaking two waves of research with approximately 50 businesses who have been connected to superfast broadband for at least six months at the first point of contact. This report provides an overview of the key findings emerging following the first wave of interviews which took place throughout February and March 2014. These findings provide a baseline against which future results will be compared. The second wave of interviews will be undertaken with the same businesses during a similar timeframe in 2015, following which a final report will be produced which will explore the journeys of businesses in using superfast broadband and how any impacts may have accrued or changed over time.

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<sup>1</sup> SERIO and Buckman Associates (2013), Superfast Cornwall Evaluation Final Midterm Report, November 2013. Available at <http://www.superfastcornwall.org/assets/file/Superfast%20Cornwall%20Evaluation%20Midterm%20FINAL%20Report.pdf>

## 2. Our Approach

### 2.1 The Survey

The longitudinal business survey was carefully designed in order to capture more detailed information than that already captured through the quarterly business survey. The focus was on gaining deeper insights into the journey of Cornish businesses connected to superfast broadband. In order to capture the quantitative data required, as well as drilling down to the more detailed qualitative elements, the survey was a mixture of open and closed questions. The survey was completed over the telephone and took approximately 30 minutes to complete. The following themes were covered in the survey (a copy of the full survey can be found in Appendix One):

- Qualitative impacts of superfast broadband. This included both internal business changes, such as new ways of working, and external changes, such as increased collaboration. In addition the survey looked at the impact of superfast broadband on business innovation and the extent to which businesses felt there were opportunities associated with innovation.
- Quantitative impacts, including an assessment of the costs of superfast broadband and the impact of superfast on jobs, financial performance and productivity.
- Environmental impacts, including changes in energy use.
- Social impacts, including improved health and wellbeing, particularly in relation to equality and diversity.
- Skill levels and training needs.

Where applicable, surveys were undertaken with the person who completed the quarterly business survey or web survey, otherwise the survey was undertaken with the most senior person at the business with knowledge of the IT systems.

In order to ensure that two waves of surveys can be completed with approximately 50 businesses, first wave surveys were undertaken with 63 businesses in total. This is on the assumption that some of these businesses may be lost through survey attrition by the time of the second wave.

All businesses participating in the longitudinal business survey had been connected to superfast broadband for over six months, with 15 being connected for up to 12 months, 25 between 12-18 months and 23 over 18 months.

Over half of participating businesses indicated they were businesses with employees (n=34), while the remainder were either sole traders (18 businesses) or partnerships (11 businesses) and, therefore, had no employees.

## 2.2 The Sample

The survey sample was based on separate lists of connected businesses provided by CDC. These included:

- Quarterly Business Survey (QBS) respondents. The QBS is a quarterly survey of businesses that have been connected to superfast broadband for 12 months or longer. Those QBS respondents who participated in waves 1 to 3 who had given permission to be contacted again were invited to take part in the survey.
- Web Survey respondents. Businesses who have completed Superfast Cornwall's online survey to indicate they are connected to superfast broadband.
- Case Studies. Superfast Cornwall has developed a number of case studies of businesses which have benefited from using superfast. These businesses were also invited to participate in the survey.
- Other sources included: a list of connected businesses provided by CDC, as well as businesses known by SERIO and CDC.

The number of interviewees from each sample source is outlined in Table One.

**Table One: Sample source**

Sample source	No. of respondents
Quarterly Business Survey	26
Web Survey	11
Case Study	3
Other	23
<b>Total</b>	<b>63</b>

Source: SERIO 2014

It should be noted that as this is the first report for the longitudinal survey, the focus is on retrospective evidence for change since the businesses first connected to superfast broadband. In contrast the second report (to be released in spring 2015) will examine whether upgrading to superfast has continued to bring about change to the businesses surveyed as they become more used to the technology.

However it was recognised that for the 13 businesses that completed waves 1 (Autumn 2012) and 2 (Spring 2013) of the QBS a considerable amount of time had passed between their QBS interview and their interview for the longitudinal survey. Consequently, where there were questions on business use and impact of superfast which were identical to those in the QBS this report highlights any changes since completing the QBS. While the sample size is small this provides some initial indications of the extent to which superfast continues to have an impact on businesses beyond the initial period following upgrading.

### 3. Business Use and Perceived Benefits of Superfast Broadband

#### 3.1 Use of Internet Functions

To provide an understanding of the impacts experienced by businesses as a result of upgrading to superfast broadband the longitudinal survey replicated the QBS and captured data on how superfast broadband is being used. As can be seen from Table Two, multiple connections (more than one device being connected at the same time) (87%) and sending and receiving large files (84%) were the two most frequently reported uses of superfast broadband. The table also highlights the proportion of businesses that have used each of these functions for the first time since upgrading to superfast. As can be seen, the functions that were most likely to be used for the first time since upgrading were sending and receiving large files (33%), cloud computing (24%), web conferencing (24%) and virtual private networks (24%).

**Table Two: Use of internet after connection to superfast broadband**

Internet Function	Currently use		First used post-SFB	
	Frequency	Percent	Frequency	Percent
Multiple connections	55	87%	13	21%
Sending and receiving large files	53	84%	21	33%
Social media	50	79%	14	22%
Remote access	42	67%	8	13%
Cloud computing	39	62%	15	24%
Remote data storage	39	62%	12	19%
Video conferencing	27	43%	11	17%
Web conferencing	27	43%	15	24%
Internet telephony	24	38%	11	17%
Virtual private networks	21	33%	15	24%
Other purpose	12	19%	6	10%

Base: All businesses (n=63)

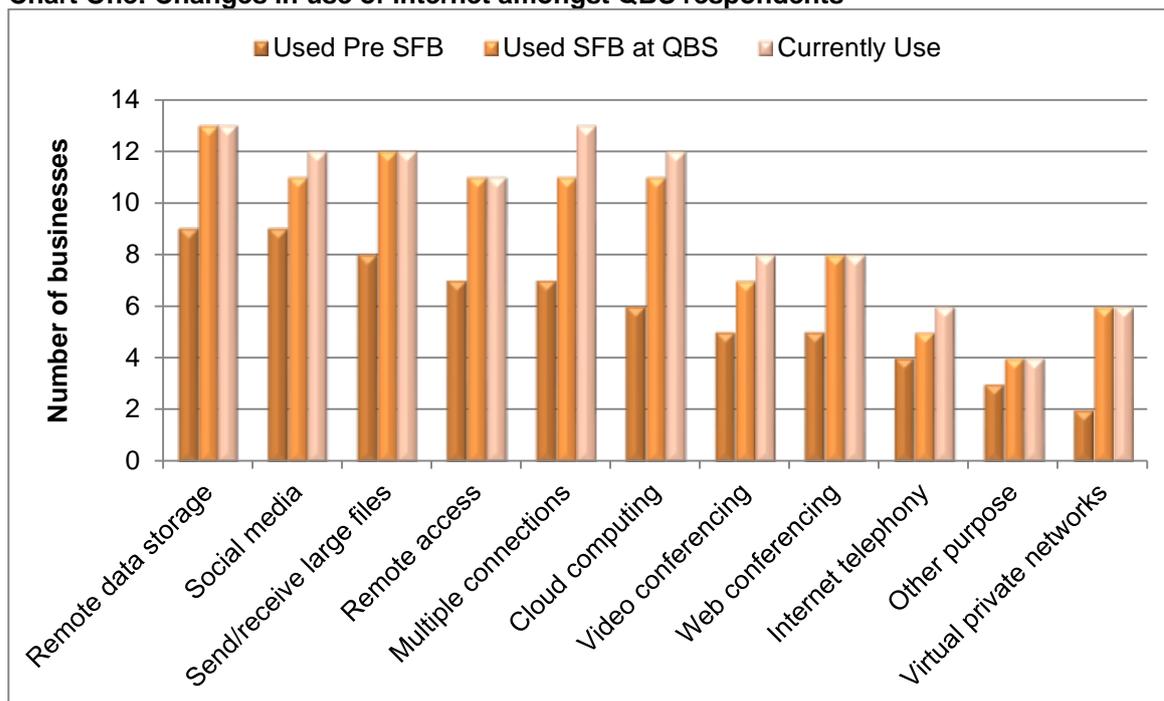
Table Three highlights that between 44% and 78% of businesses had used each of the explored functions before upgrading their connection, however usage had increased since upgrading. Amongst these businesses superfast broadband seems to have had the most impact on internet telephony and video conferencing, with three-quarters of businesses using these functions prior to upgrading indicating they use these more now (75% for both).

**Table Three: Frequency of usage after connection to superfast broadband**

Internet Function	Used pre-SFB <sup>1</sup>		Use more post-SFB <sup>2</sup>	
	Frequency	Percent	Frequency	Percent
Social media	39	78%	17	44%
Sending and receiving large files	40	75%	21	53%
Multiple connections	40	73%	21	53%
Internet telephony	16	67%	12	75%
Remote data storage	25	64%	12	48%
Remote access	27	64%	12	44%
Web conferencing	15	56%	10	67%
Virtual private networks	10	48%	7	70%
Cloud computing	18	46%	10	56%
Video conferencing	12	44%	9	75%
Other purpose	6	50%	2	33%

Base: <sup>1</sup>All businesses reporting to use each function currently (n=various); <sup>2</sup>All businesses reporting to use each function pre-SFB (n=various)

The journey of businesses in terms of their use of superfast broadband was explored to some extent through the first wave of the longitudinal survey. Businesses that had previously participated in the QBS wave 1 (Autumn 2012) and wave 2 (Spring 2013) (n=13) had already indicated which internet functions they used prior to upgrading their internet connection, and which functions they used superfast broadband for at the time of their QBS interview. Those respondents that indicated they didn't use specific functions during their QBS interview were asked if they use the functions now. As Chart One highlights, there has been a marked increase in usage across all functions when comparing pre-superfast usage and usage at the time of the QBS interview, but usage has generally plateaued, with usage for six of the 11 functions remaining the same since the QBS interview, and a slightly larger number of businesses using five of the functions. This suggests that the initial impact of superfast broadband on businesses usage of internet functions has been sustained. While these findings are based on a very small sample size it does provide an early indication that the most significant changes in usage occur soon after connecting to superfast, but that these changes are sustained over the long term. As a result, evidence of changes in usage between waves 1 and 2 of the longitudinal survey might be quite limited.

**Chart One: Changes in use of internet amongst QBS respondents**

Base: 1 All QBS wave 1 and wave 2 businesses (n=13)

To add more insight to the findings, respondents to the longitudinal survey that used these functions more frequently since upgrading their connection were asked to indicate how this has benefitted their business, if at all. The key benefits mentioned focused on efficiency and time savings as a result of upgrading to superfast broadband, which potentially could lead to increased productivity. This was particularly mentioned in relation to sending and receiving large files, with 24 businesses mentioning this.

***'[Sending and receiving large files] Not taking five hours, it takes 30 minutes and therefore you are able to do more jobs'***

***'Previously [sending and receiving large files] caused it to crash because it wasn't fast, which prevented anything else being done'***

***'It's speed of operation... it clears up my time a lot quicker. I'm spending less time in the office and sending things, and more time working'***

Time and efficiency savings were also mentioned in relation to video and web conferencing, with the main benefits focusing on being able to communicate in a more personal manner with clients utilising the internet, or accessing training courses, without spending time and money on travel.

***'Brings to the business general efficiency, for example, meetings without all having to travel to one place. [Superfast] brings efficiency and improved communication'***

Time and efficiency savings were also mentioned in relation to cloud computing, specifically in relation to the ability to access files virtually.

***'We get bills out quicker because everyone can see the job sheets. XXX job finished, can email invoice that day. Before it would be back to the workshop and give the job to the secretary, then another four days or so before the client gets it'***

Other key benefits focused on the greater flexibility that superfast broadband offers, and this was particularly in relation to remote access. Respondents highlighted that, provided they have an internet connection, they can access relevant data remotely, and, as a result, can respond to customers in a more timely manner.

***'Any queries I can sort from wherever I am, that's the main benefit. I tend to be out of the office so I can handle queries away from the office and send a response back as soon as possible'***

A small number of businesses identified that utilising superfast for various internet functions had led to positive impacts on their business, either as a result of attracting and winning new business, developing new ways of working, or superfast being a catalyst for change within the business.

***'It has benefitted us because we have one particular client that uses superfast a lot. They need to access files from their cloud storage, so we put things up there. Without it we couldn't work with that client'***

***'It's about collaboration. When seeing and talking to clients [via web conferencing] it's more likely they will do business with you, rather than written text and driving for hours'***

***'We now have online video and webinars for some of the courses. Since we have offered this there has been a marked increase in uptake, and consequently profit. We used to have to hire a venue and have refreshments, now we don't which has resulted in less cost'***

***'We are able to market ourselves globally and conduct sales abroad including Australia, on our old connection we could not'***

***'We use twitter to promote the company, and use LinkedIn. With both I have got business as a result, customers as a result'***

***'Our video surveillance was growing before superfast, however the connection we have now now allowed us to do it. We probably could have done it without superfast but the fact is we didn't'***

### **3.2 Use of Electronic Processes and Systems**

Respondents were also asked about their usage of a number of electronic processes and systems. As shown in Table Four, the majority of businesses indicated that they used superfast broadband for online marketing (65%), while less than half indicated that they used it for electronic logistics or supply chain functions (48%) or for online sales (41%). Around half of businesses indicated that they used electronic logistics or supply chain functions and online marketing more frequently as a result of upgrading their connection (50% and 46%).

**Table Four: Use of electronic processes and systems**

Electronic process/system	Currently use <sup>1</sup>		Use more post-SFB <sup>2</sup>	
	Frequency	Percent	Frequency	Percent
Online marketing	41	65%	19	46%
Logistics or supply chain	30	48%	15	50%
Online sales	26	41%	10	38%
Something else	11	17%	7	64%

Base: <sup>1</sup>All businesses (n=63); <sup>2</sup>All businesses reporting to use each function currently (n=various)

To add more depth to the findings, the longitudinal survey explored the benefits of adopting these electronic processes and systems to their business amongst businesses that used these processes and systems more frequently as a result of their upgraded connection. The key benefit identified as a result of using electronic logistics or supply chain functions was speed, with electronic ordering, for example, being a lot quicker than orders being sent by post before upgrading to superfast.

***'It is instant, rather than printing, posting and delivery. It is a lot quicker for the business'***

Efficiency and speed were also areas identified as benefits as a result of using online marketing, both in terms of a faster internet connection, meaning businesses are more likely to keep their website updated as the process is a lot quicker, and making their website more accessible to customers as pages download quicker. Other benefits focused on being able to reach a larger audience through the website and developing better relationships with customers, either through targeted online marketing or more timely updates through social media.

***'I can go in and change the website, that probably would have been quite awkward without superfast broadband'***

***'We want a direct result immediately when promoting a discount or voucher.... we send about 14,000 emails. We couldn't send that without superfast broadband'***

***'It's not generated more business, but it has allowed us to have closer relationship with customers with updates through the social media networks'***

In terms of online sales, two businesses specifically mentioned that they had re-launched their websites to utilise e-commerce, which had generated new enquiries. One business felt that there was a general culture for increased internet usage, which in turn had resulted in more online enquiries.

### 3.3 The Perceived Benefits of Superfast Broadband

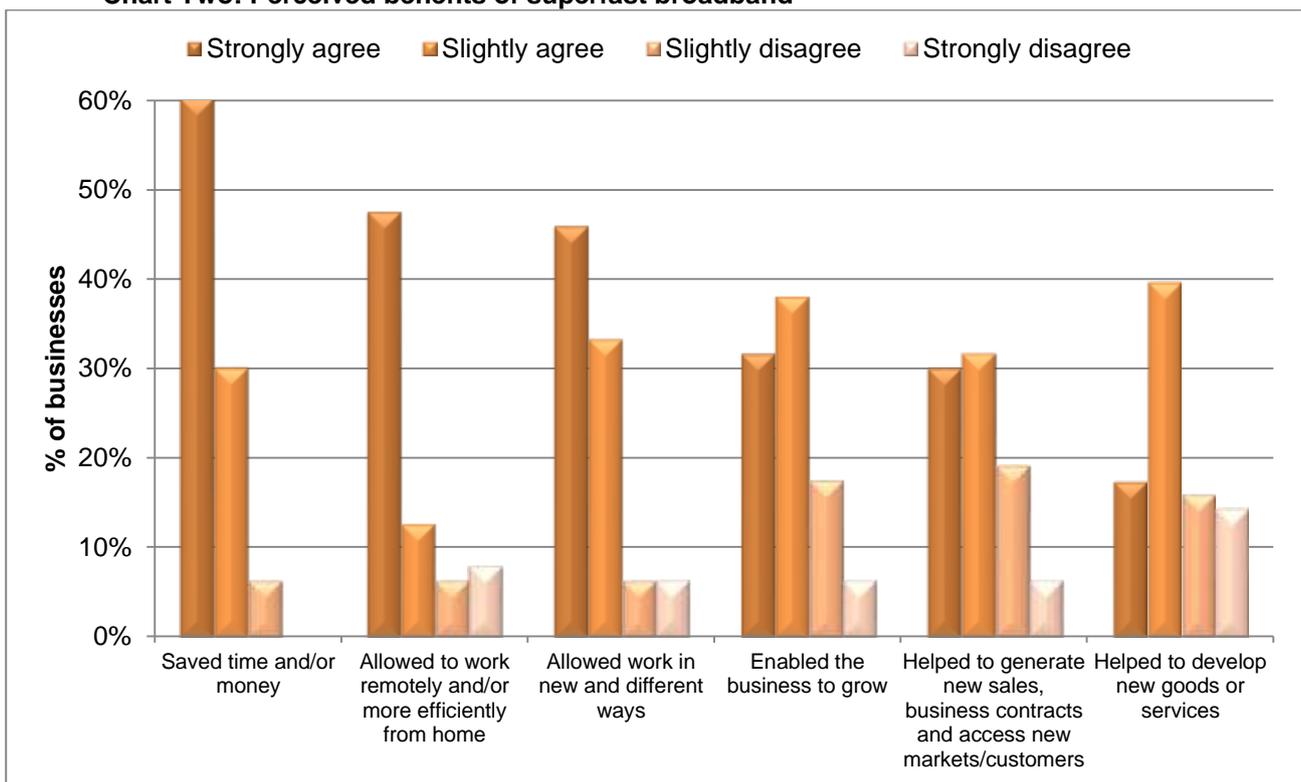
The survey captured perceptions of the economic benefits brought about by superfast broadband by asking respondents to indicate the extent to which they agreed or disagreed with a series of statements. As shown in Chart Two below:

- The findings from this mirror the key benefits identified for utilising internet functions resulting from upgrading to superfast, with the large majority of businesses (90%)

reporting that superfast broadband had saved their business time and/or money (60% strongly agreed with this statement and 30% slightly agreed). This was the most frequently perceived benefit;

- Close to four fifths (79%) felt that superfast broadband had enabled their business to work in new and different ways (46% strongly agreed and 33% slightly agreed);
- Over two-thirds of business (70%) agreed that superfast broadband had enabled their business to grow (32% strongly and 38% slightly agreed);
- 62% of businesses agreed that superfast broadband had helped to generate new sales, business contracts and access to new markets or customers (30% strongly and 32% slightly agreed);
- 60% perceived that superfast broadband allowed employees to work remotely and/or more efficiently from home (48% strongly and 13% slightly agreed);
- Over half (57%) reported that the development of new goods or services had been helped by superfast broadband, highlighting the potential of the upgraded connection to enhance a business' ability to innovate (17% strongly and 40% slightly agreed).

**Chart Two: Perceived benefits of superfast broadband**



Base: All businesses (n=63)<sup>2</sup>

The longitudinal survey captured more depth about these impacts by asking respondents that felt superfast broadband had had an impact on their business to indicate how superfast had done this. Respondents frequently referred back to the internet functions they were now using to highlight how superfast broadband had bought about economic benefits to

<sup>2</sup> 'Don't know' and 'doesn't apply' responses are not included in the chart therefore percentages will not total 100%.

their business. Consequently there was considerable overlap in the reasons given for how superfast had resulted in these benefits.

- A large proportion of businesses indicated that the way superfast had **enabled their business to grow** was as a result of working more efficiently and saving time. More specifically a number of businesses identified that superfast broadband had enabled them to utilise more sophisticated internet communication functions which, in turn, had resulted in reduced time and money spent on travel. Furthermore, respondents highlighted that the general faster speeds at which superfast broadband operates had enabled them to carry out functions more quickly, resulting in time savings, and in some cases businesses went on to state this made them more productive as a result.

***'You can ... do more in less time'***

***'Moving big files, allowing people to work from home, all good efficiency gains'***

***'As a result of video conferencing we can go to meetings without going anywhere, saving petrol and time'***

- A large number of respondents indicated that superfast broadband had **allowed their business to work in new and different ways** as a result of utilising more sophisticated internet functions.

***'Access to cloud is seamless and rapid. With a slow connection everything would be local and we would have problems when travelling'***

- The flexibility offered by superfast broadband was identified as the way in which the technology had **enabled employers and employees to work remotely or more efficiently from home**. This included people working at hours that suit them, being able to work from home if a dependent is unwell, or if the weather stops them from being able to get to the office.

***'Remote log in on the web means staff can work outside of hours and fit it in around their own lives'***

***'Remote access into the office and access to all our data on the server and the phone system means you don't need to come into the office and are able to work at home in the evenings'***

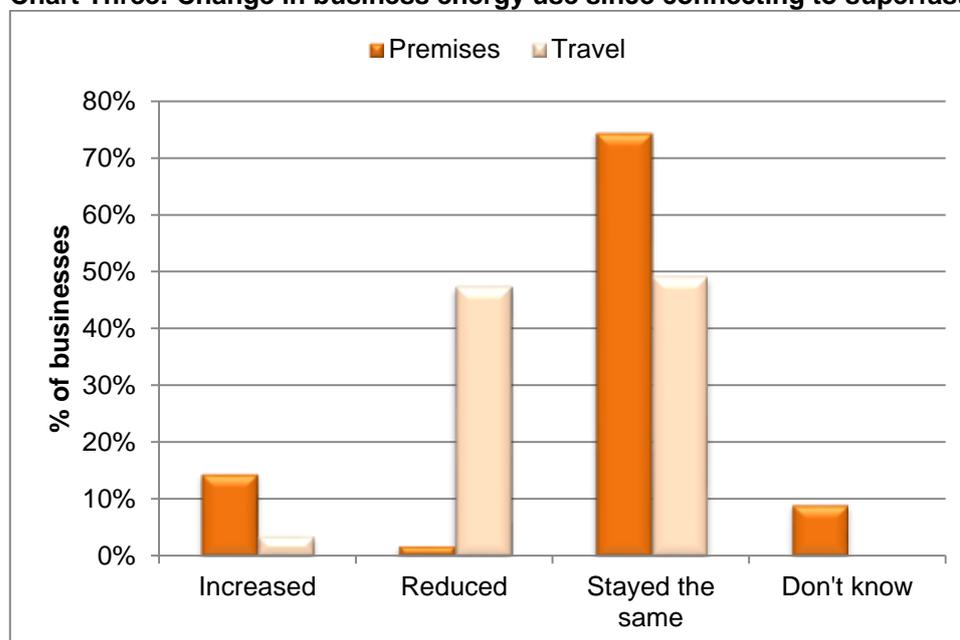
## 4. Environmental and Social Impacts of Superfast Broadband

### 4.1 Environmental Impacts

In order to determine the environmental impact upgrading to superfast broadband may have had on businesses, respondents were asked whether their business premises' energy use and travel usage had changed since connecting to superfast. As Chart Three highlights, superfast appears to have had more of a positive impact on businesses' travel usage than premises energy use. The key points to note are:

- For the majority of businesses (75%) the energy use of their business premises had not changed since connecting to superfast. However 15% (n=8) reported that their energy use had increased since connecting to superfast. Further information on these eight businesses is included below.
- Only one business had seen its premises' energy use fall since connecting to superfast, however the business stated that this was not as a result of superfast but was due to them installing more efficient lighting and radiator systems.
- While 49% of businesses reported that their travel usage had stayed the same since connecting to superfast, 47% (n=27) felt it had reduced. Further information on these 27 businesses is included below.
- Only 4% of businesses (n=2) felt their travel usage had increased since connecting to superfast. Both of these businesses attributed this increase to an increase in their workload and customer base, but one emphasised that this was not as a result of superfast.

**Chart Three: Change in business energy use since connecting to superfast broadband**



Base: All businesses providing a response (Premises n=55; Travel n=57)

The eight businesses which saw their premises' energy use increase since connecting to superfast provided further details on why they felt this had happened. All but one of the businesses attributed the increase to factors related to superfast, which included:

- Increased customers and workload as a result of upgrading to superfast broadband (3 respondents);
- Increased use of technology, including computers and the internet (2);
- A rise in power consumption due to working from home (2).

One respondent also stated that they did not feel the increased use of cloud computing by their business had reduced their energy usage.

Twenty six of the 27 businesses who felt that their travel usage had reduced since upgrading to superfast also provided further details on why they felt this was the case. All but one of these businesses cited reasons which related to their connection to superfast, although one business did not provide any further details. The reasons given for reduced travel usage by the 24 businesses are outlined in Table Five and are linked to using more sophisticated internet functions mentioned in Section 3.1. The most common reason given was access to remote conferencing facilities which reduced the need to travel to see clients, while home or remote working was also a common factor mentioned. Other points to mention included:

- Businesses which referred to the ability to send large files as helping reduce travel costs cited a reduced need to visit clients and the absence of any need to do a “post run”.
- One of the respondents who mentioned doing more business online cited the positive impact of being able to remotely connect onto their customers’ computers on their travel usage. Another indicated they had been able to reduce the amount of travelling they did to London as a result of superfast.
- Being able to access training through webinars had helped reduce out-of-county travel for one of the two businesses that mentioned the impact of accessing training and support online.

**Table Five: Reasons for decline in travel usage**

Reason	No. of responses
Video or web conferencing	9
Remote/ home working	6
Ability to send large files	4
More business done online	4
Training and support available online	2
Online ordering	1

Base: All businesses reporting reduced travel usage due to superfast and providing a response (n=24)

## 4.2 Social Impacts

A particular aim of the longitudinal business survey was to explore any social impacts brought about as a result of businesses upgrading to superfast broadband, particularly around the impact of home-working opportunities for disabled employees, those with caring

responsibilities and employees living in remote locations. Therefore respondents that indicated upgrading their connection had enabled themselves or employees to work from home (n=38), were specifically asked if they felt that superfast broadband makes it easier for businesses to attract, retain and professionally develop employees living in remote rural areas, those with caring responsibilities and those with mobility issues. Overall over three-fifths of respondents (63%, n=24) felt that it does. Just one respondent didn't think superfast does make it easier while the remainder were either unsure (n=8) or provided an alternative response (n=4).

Amongst these respondents, those that were from businesses with employees (n=20) were specifically asked if superfast broadband had enabled their business to attract, retain or professionally develop employees from these groups. A small proportion of businesses (n=5) indicated that superfast broadband had already enabled their business to attract, retain or professionally develop employees living in remote rural areas (n=4), those with caring responsibilities (n=3) or those with mobility issues (n=1). One business expanded on their answer highlighting that the upgraded connection had benefited employees living in remote rural areas as they did not have to travel out of Cornwall. Another business expanded that superfast broadband had benefited employees with caring responsibilities as it provided the flexibility to work from home when dependents were unwell.

## 5. Skills Levels and Training Needs

### 5.1 Skills Levels

Utilising superfast broadband to use new internet functions or create new products, services or process requires a certain level of IT proficiency within any business. Consequently all businesses were asked to rate the IT related skills levels of themselves and their employees and to highlight whether they had any skills or training needs.

Sixty of the 63 respondents were able to provide details on the IT related skills levels of themselves and their employees. A total of 39 respondents described their IT skills as either “high” and/or “adequate”, although 7 of these businesses felt there was potential room for improvement or further development. Fourteen additional businesses felt their skills were inadequate and should be improved. Of the remaining seven businesses, six described their skills as average but did not identify any further areas for improvement, while one simply reported that they had just received training to meet their existing skills needs.

Of the 21 businesses that felt their IT skills could be improved or further developed, 18 provided further details on specific skills they needed. As Table Six shows, the most common skills requirement mentioned was basic IT skills, which included using basic Microsoft Office packages, followed by skills related to digital marketing and e-commerce.

**Table Six: IT skills requirements and areas for improvement**

Skills	No. of responses
Basic IT skills	5
Digital marketing/e-commerce	4
Digital networks and social media	2
Website design	2
Web conferencing	1
Remote networking	1
Drawing electronically	1
Adobe software	1
Specialist support	1

Base: All businesses feeling their IT skills could be improved and providing a response (n=18)

### 5.2 Training Needs

Respondents were also asked whether their business required any training to help them further exploit superfast broadband. Of the 57 respondents to this question, 15 felt their business would benefit from training, while 39 did not think it would and three did not know. Of the 15 businesses that would benefit from training, four mentioned only general non-specific superfast related training, while one was unsure. The remaining 11 businesses highlighted the following training areas:

- Helping businesses become aware of additional ways they can make use of superfast broadband (3 respondents);
- Websites, including training to set-up a website (2);
- Marketing (2);

- Collaboration (1);
- Video conferencing (1);
- Using photoshop (1).

## 6. Exploiting Superfast Broadband

### 6.1 Opportunities for Collaboration

The longitudinal business survey also explored businesses opportunities for innovation as a result of upgrading to superfast broadband. Just over two-fifths of businesses (43%, n=27) indicated that they had engaged in collaborative working since connecting to superfast broadband. The extent to which superfast had enabled these businesses to engage in collaborative working were also explored. A large proportion of these businesses (n=11) indicated that superfast had either had a significant impact in enabling these collaborations or that superfast had made it easier, and this was generally because it enabled collaborations over long distances and more timely communications.

***'We have collaborated with a business in the north via the web using Skype, we wouldn't have been able to do that without superfast'***

***'Without superfast broadband it would be a struggle to integrate with people'***

***'Superfast has sped up the process of file transferring and we can easily talk to someone as if they are in the same office, through telephony and video conferencing'***

Of the remaining businesses, six indicated that superfast broadband had had some kind of impact on their ability to engage in collaborative working, while five felt it had no impact.

### 6.2 Opportunities for Innovation

Businesses were also asked if they felt there are opportunities for business innovation linked to the availability of superfast broadband. Close to three fifths of respondents did feel there were opportunities (62%, n=39), while 19% (n=12) didn't feel there were opportunities for their business and 11% (n=7) were unsure what the opportunities might be. Amongst those feeling there were opportunities (n=39) 17 respondents indicated that, while superfast broadband did offer opportunities for business innovation in general, they were unsure what these were or had not had time to explore these yet. More positively, two businesses indicated that they had already done something innovative, one had been able to put a social media strategy in place and the other were able to stream live concerts.

### 6.3 Further Opportunities for Exploitation

The longitudinal business survey aims to explore businesses journey in using superfast broadband and how any impacts may have accrued or changed over time. Looking to the future over half of businesses (n=32) indicated that they were looking to further exploit superfast broadband. The intentions of these businesses are outlined below.

- For six businesses the intention was to have an increased online presence, and this covered online marketing, sales and ecommerce.
- Five respondents highlighted plans to further exploit online communication tools, such as Skype, internet telephony and video and web conferencing.

- Three businesses specifically mentioned rolling out superfast broadband to further premises and two specifically focused on exploiting the remote access.
- Five businesses were unsure how they would further exploit superfast.

The reasons for businesses not looking to further exploit superfast broadband (n=26) were also explored in more detail, with key reasons outlined below.

- Four of these businesses felt they has utilised all the potential benefits superfast could offer them.
- Nine indicated that they were either happy with the way they currently used superfast, or that exploitation of superfast was not relevant to their type of business.
- Four businesses indicated that they did not have the time to explore further ways of exploiting superfast.
- Three businesses indicated that they didn't know how to further exploit superfast.

## 7. Influence of Superfast Broadband

### 7.1 Establishing a Business

Three businesses undertaking the longitudinal survey indicated that they had set up their business since superfast broadband became available in their area.

- Of these, one indicated that connecting to superfast broadband was ‘very influential’ in their decision to set up the business. The business, an architectural practice, highlighted that superfast broadband ensures the business is efficient and speeds up the work they do.
- One business indicated that connecting to superfast broadband was ‘not at all influential’ in their decision to set up the business, elaborating that they had been made redundant, and this was the main factor in their decision to set up their business.
- The remaining business took part in the longitudinal business survey as a pilot respondent and was not asked this follow up question.

### 7.2 Relocating to Cornwall

Three businesses undertaking the longitudinal survey indicated that their business had relocated to Cornwall since 2010, when superfast broadband started being rolled out in the county.

- Just one business felt that the availability of superfast broadband was a ‘very important’ factor in their decision to relocate the business to Cornwall. They highlighted that, without superfast broadband the relocation would not have been an option, as being able to connect to their Manchester office was essential.
- One of the remaining businesses indicated it had not been an important factor at all, and that other factors were drawing the business to relocate to Cornwall.
- The other business didn’t indicate the importance of superfast broadband in their decision to relocate.

## 8. The Economic Impact of Superfast Broadband

### 8.1 Introduction

As with the QBS, the longitudinal business survey explored the economic impact of superfast broadband on businesses. Businesses were invited to provide economic metrics including financial accounts information and changes in employee numbers. This was then used to estimate the Gross Value Added (GVA)<sup>3</sup>.

### 8.2 Connection Costs

In order to understand the financial impact on businesses of connecting to superfast it is important to take account of the cost they incur in connecting. Fifty three of the 63 businesses were able to provide the annual cost of their connection to superfast broadband. As Table Seven below shows, the average cost across these businesses was £539, although there was considerable variation, related to the size of the business and the number of connections needed. The lowest reported annual cost was just £60, while the highest was £4000.

**Table Seven: Annual cost of superfast connection**

	Annual Cost
Total	£28,557
Mean	£539
Range	£3,940

Base: All businesses providing a response (n=53)

In addition businesses were asked whether they had faced any additional costs when connecting to superfast. Of the 61 businesses which responded to the question, 18 reported incurring additional costs. As Table Eight shows, the majority of the costs were either associated with installation and set-up or with the purchase of new modem, routers, computers or servers. Other costs included: switching of offices and telephones; technological equipment; cloud resources; and a new firewall.

**Table Eight: Additional costs associated with connecting to superfast**

Additional costs	No. of responses
Installation/set-up costs	9
New modem or router	3
New computer(s) or server(s)	3
Other	4

Base: All businesses incurring additional costs (n=18)

The additional costs reported by the 18 businesses came to a total one-off cost of £16,563, or an average of £920 per business. However the figures specified varied considerably from as little as £10 (for postage for a router from BT) to £6,000 for a new server.

<sup>3</sup> GVA is the most common method of measuring economic impact at a local or regional level. It measures each individual producer, industry or sector's contribution to the economy.

### 8.3 Business Performance: Jobs and GVA

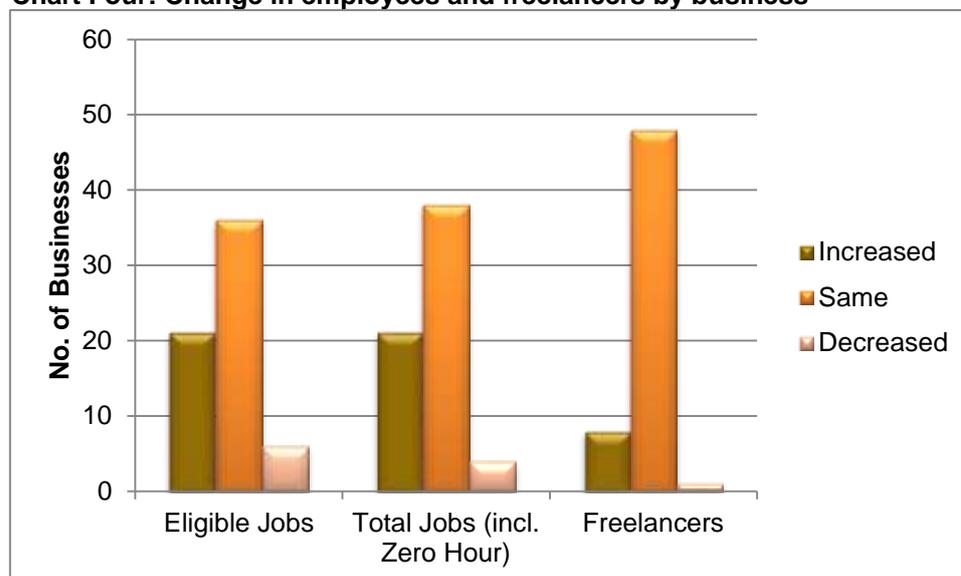
#### 8.3.1 Impact on Jobs

As with the QBS, the longitudinal survey collected information on the impact of superfast broadband on employee numbers. Of the 63 businesses all but one were able to provide information on employee numbers, both currently and before they connected to superfast. In addition, businesses were also asked how many of their employees (if any) were on zero-hour contracts (which are not an eligible ERDF jobs output), and whether they used any freelancers or contractors on a regular basis.

The number of businesses which reported changes in employee numbers since upgrading their connection are shown in Chart Four.

- A majority of businesses (n=36) reported no changes in their (ERDF output) eligible employee numbers. Of the remaining businesses, 21 reported an increase while six reported a decrease.
- A total of seven businesses reported employing staff on zero hour contracts. If these positions are included then a slightly higher number (38) stayed the same, whilst 21 businesses increased their employee numbers and four decreased.
- A majority of businesses (48) did not change their use of freelancers since connecting to superfast, although eight reported an increase and one reported a decrease.

**Chart Four: Change in employees and freelancers by business**



Base: All businesses providing a response (n=62)

Table Nine shows the actual change in employee and freelance numbers that took place since the businesses connected to superfast. As the table shows, eligible jobs increased considerably (by 13.3%) over the period. While the percentage increase in zero-hour and freelance contracts was proportionally much higher, this was from a very low base, therefore caution should be taken when interpreting these findings.

**Table Nine: Change in employee and freelance numbers by FTE**

Job type	Number before SFB	Current number	Change (number)	% Change
Eligible Jobs	272.9	309.2	36.3	13.3%
Zero Hour	6.8	14.4	7.6	111.8%
Total Jobs	279.7	323.6	43.9	15.7%
Freelancers	5.6	16	10.4	185.7%

Base: All businesses providing a response (n=62)

### 8.3.2 Attributable FTE

In order to estimate how much of this change in employee numbers could be attributed to superfast broadband, businesses were asked to estimate how many employees and freelancers they would currently have in the absence of superfast. Of the 63 businesses, 59 were able to provide an estimate. Of these, 44 businesses felt that their employee numbers would be the same as they are now, while 12 felt they would be lower and 2 that they would be higher.

Ten of the 12 businesses which felt that their employee numbers would have been lower in the absence of superfast provided detail on why they felt this was the case:

- The most common reason given was that superfast had enabled their business to grow and for them to manage a larger number of employees (4 businesses). This includes one respondent who stated that they would not have become a global business without superfast.
- Being able to provide a better quality and faster service to clients was another reason why businesses attributed job creation or safeguarding to superfast (2 businesses).
- Superfast was attributed for creating and safeguarding jobs by: saving a contract for one business from a multi-national company; preventing a business ceasing to trade; enabling a business to relocate to Cornwall; and ensuring a business could relocate within Cornwall and enable its employees to do homeworking.

The two businesses which felt their employee numbers would have been higher without superfast both felt it would have taken much longer to get work done without superfast, suggesting that they felt superfast had led to efficiency savings.

The 14 businesses which felt their employee numbers would be different without superfast reported an aggregate difference of 17.4 eligible FTE, of which 11.4 eligible FTE was jobs created and 6 eligible FTE was jobs safeguarded. If zero hour contracts are included then the figure rises to 17.8 FTE, of which 11.7 FTE was jobs created and 6 FTE was jobs safeguarded.

### 8.3.3 Impact on GVA

In order to assess changes in the economic performance of the businesses calculations for Gross Value Added (GVA), which is the standard measure of economic performance, were made. With a view to adding more depth to the economic performance findings from the QBS, the longitudinal survey uses the businesses financial accounts information on

operating profit, employee costs and depreciation (see Box One). This provides a more direct estimate for GVA which can also be used to estimate labour productivity.

### Box One: Gross Value Added Calculation

Estimates of GVA can be obtained in several ways. In this report, SERIO have used a direct estimate of GVA. This comprises:

- Operating profit: Net profit before tax;
- Compensation of employees: Wages and salaries, national insurance and pension contributions;
- Depreciation: Economic depreciation which includes change in the market value of capital and fixed assets.

The calculation is as follows:

$$\text{GVA} = \text{Operating profit} + \text{Compensation} + \text{Depreciation}$$

Of the 63 businesses only 10 were able to provide complete GVA figures for all three components. However 30 businesses were able to provide figures for operating profit and employee costs, which usually make up the largest components of the GVA calculation<sup>4</sup>. Table Ten includes GVA data for these 30 businesses. While, as the table shows, depreciation is by far the smallest of the three components overall, it should be noted that the absence of depreciation figures for 20 of the businesses does mean the overall GVA figure will be an underestimate.

As is shown from the table GVA increased by an estimated 94% since the 30 businesses connected to superfast broadband, from a cumulative total of £3.4 million to £6.6 million. By far the largest increase came from operating profit which rose by an estimated 211% from £1.4 million to £4.4 million.

The projected increase in operating profit of 211% is exceptional high. However this is largely due to the performance of just one business which increased its operating profit from £300,000 before superfast to £3 million currently. In a small sample exceptional performance of this kind will skew the data.

**Table Ten: Gross GVA figures**

	Before SFB	Current	Change	% Change
Operating Profit	£1,417,000	£4,402,674	£2,985,674	211%
Employee Costs	£2,712,336	£2,818,223	£105,887	4%
Depreciation	£43,750	£37,523	£-6,227	-14%
Total	£3,429,750	£6,640,420	£3,210,670	94%

Base: All businesses providing a response (n=30; Depreciation n=10)

<sup>4</sup> Businesses were asked to be as specific as possible with regard to GVA component figures. However, in some cases businesses were only able to indicate within a range of figures. Where this was the case mid-points were used to provide an estimate that could be included in the GVA calculation.

### 8.3.4 Attributable GVA

The Superfast Cornwall project is obligated to report both GVA based on jobs created and GVA based on jobs safeguarded. In order to estimate both GVA created and safeguarded which is attributable to superfast, the figures for attributed FTE (see 8.3.2) were used as a proxy. Further information on the methods used are contained in Appendix Two.

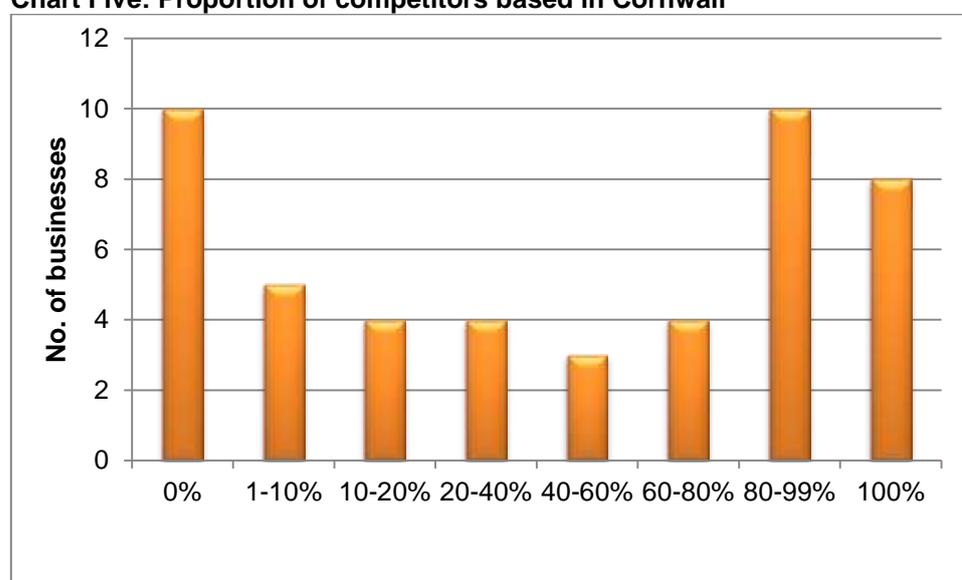
The estimated attributable GVA based on these calculations came to a total of £444K<sup>5</sup>, based on the figure for attributed FTE growth of 11.4. Similarly the figure for safeguarded GVA came to £257K based on 6 FTE safeguarded. These figures provide estimates of the economic impact which superfast had on these businesses operations in Cornwall.

### 8.3.5 Deadweight

In order to help account for displacement businesses were asked to estimate the proportion of their competitors who were based in Cornwall. As Chart Five shows, of the 48 businesses that were able to provide this information, a majority (27) believed that over 40% of their competitors were based in Cornwall. Interestingly a large proportion (18) reported that Cornish competitors made up over 80% of their competitors, while a notable proportion (10) stated that they had no competitors in Cornwall.

These figures suggest that while there is likely to be considerable market share displacement, this varies considerably depending on the type of business. It should be noted however that these figures do not distinguish between competition with Cornwall companies for business within Cornwall and competition with the same companies for custom outside of the county. Consequently while this data is used as a proxy for displacement it may overstate it in some cases.

**Chart Five: Proportion of competitors based in Cornwall**



Base: All businesses providing a response (n=48)

<sup>5</sup> The figure for total growth in GVA is different to the figure in Table Ten as it includes estimates for GVA change based on FTE changes for those businesses which didn't provide GVA. The substantial difference between the figures for total and attributed GVA growth is partly due to the response from the outlier discussed in Section 8.3.3 which did not attribute any of its FTE increase to superfast.

### 8.3.6 Net GVA and FTE

While attributable FTE and GVA provides a robust picture of the impact of superfast broadband on the businesses themselves, net FTE and GVA figures are required to consider the impact on the economy as a whole.

In order to work out net GVA and net FTE figures the data for attributed FTE and GVA (see Sections 8.3.2 and 8.3.4 respectively) were adjusted to account for displacement (based on Chart Five) and the multiplier (see Appendix Two for further details). As Table Eleven shows the figure for net eligible FTE is 10.6 while the figure for net GVA is £424K (see Box One for further details).

**Table Eleven: GVA and FTE created**

	Eligible FTE	GVA
Total Growth	33.3	£3,788,734
Attributed Growth	11.4	£444,487.52
Net Growth	9.6	£424,219.65

Base: All businesses providing a response (n=62)

A similar calculation was also made to estimate the figures for attributed and net GVA and FTE safeguarded. As Table Twelve shows the net eligible jobs safeguarded is estimated at 3.7 FTE, while net GVA safeguarded is £169K.

**Table Twelve: GVA and FTE safeguarded**

	Eligible FTE	GVA
Attributed Safeguarded	6	£256,993
Net Safeguarded	3.7	£168,651

Base: All businesses providing a response (n=62)

It should be noted that while the net FTE and GVA calculations provide some indication of wider economic impact the main focus of the report is on the impact on the businesses which is best assessed through attributed GVA and FTE.

### 8.3.7 Impact on Productivity

While economic impact is usually assessed through job creation and safeguarding, labour productivity (the value produced per employee) is also an important measure of impact. GVA per FTE is a standard measure for labour productivity and was therefore calculated for each of the businesses which supplied GVA data<sup>6</sup>.

Of the 27 businesses which provided complete GVA and FTE data the average GVA per FTE figure before connecting to superfast was £28,422. Since this point 13 businesses saw their GVA per FTE increase, while for eight it declined and for six it stayed the same. The average GVA per FTE figure at the time of the survey was £31,132, a rise of £2,710 or 9.5%. This suggests that labour productivity overall has increased since the businesses

<sup>6</sup> As labour productivity is not an ERDF output for the programme GVA per FTE figures for labour productivity include zero hour contracts. This also ensures that labour productivity is not overstated through the exclusion of hidden employees.

connected to superfast, which may be linked to improvements in efficiency discussed earlier.

## 9. Conclusions

### 9.1 Introduction

The final section of the report draws some initial conclusions from the first wave of the longitudinal business survey. It must be emphasised that the findings from the initial wave are very much a baseline. As such, this report provides an indication of businesses current position with regards to the impacts superfast broadband brings to businesses, from which future comparisons will be drawn. This is particularly the case regarding the economic impacts that superfast brings to businesses participating in the longitudinal survey. This report does, however, provide more detail on the economic, social and environmental impacts than that provided through the QBS.

### 9.2 Initial Conclusions

- **Changing and increasing internet use:**  
The findings highlight that superfast broadband is having an impact on the way businesses make use of the internet. For example, the findings indicate that a significant proportion of businesses are making use of superfast broadband to access different internet functions for the first time. Furthermore the findings highlight that the frequency with which businesses are using certain internet functions has increased as a result of upgrading to superfast broadband. However, preliminary findings based on the 13 businesses that participated in waves 1 or 2 of the QBS suggest that, while usage of various internet functions saw a marked increase compared to usage pre-SFB, usage has generally plateaued, which might suggest the impact of superfast broadband on internet usage is more immediate, but that these changes have a lasting impact on businesses.
- **Superfast broadband is benefiting businesses:**  
Businesses consistently identified time and efficiency savings as the key ways in which superfast broadband was benefitting the business. This included being able to carry out tasks quicker as a result of an upgraded connection and less travel time and costs as a result of virtual communication tools.
- **Superfast broadband is having some environmental and social impacts:**  
While very few businesses felt superfast broadband was having a positive impact on the energy use of their business premises, almost half of businesses indicated that superfast broadband was having a positive impact on their travel usage, and this was generally identified as being a result of utilising more sophisticated internet functions. The majority of businesses agreed to some extent that superfast had potentially had an impact on employee wellbeing by enabling them to work remotely and/or more efficiently from home. Over three-fifths of these respondents were in agreement that superfast broadband makes it easier for businesses to attract, retain and professionally develop employees living in remote rural areas, those with caring responsibilities and those with mobility issues. Furthermore, a small proportion of businesses indicated that superfast had already enabled them to benefit employees from these groups. It will be interesting to see how these impacts change and develop over the year.
- **Limited requirements for further training:**  
Despite only a small proportion of businesses identifying a need for training to help them further exploit superfast broadband, a number identified uncertainty around how they could fully exploit superfast. Given that some internet functions are not

being utilised as much as they could be, it will be interesting to see if training requirements change over time if businesses adapt and find new ways to utilise the technology. The follow up survey should provide more insight into these changes.

As already highlighted, this report provides a baseline position from which the journeys of businesses in using superfast will be compared, alongside how any impacts may have accrued or changed over time. The follow-up interviews will take place with the same businesses in early 2015, following which a final report will be produced which will explore these economic, social and environmental impacts of superfast broadband in more detail.

## **Appendices**

**Appendix One: Longitudinal Business Survey**

**Appendix Two: GVA and FTE Calculations**

## Appendix One

# Longitudinal Business Survey for Superfast Cornwall

As discussed with you previously, Cornwall Development Company has commissioned SERIO, at Plymouth University, to undertake a longitudinal survey amongst businesses that are connected to superfast broadband. The purpose of the survey is to explore in more detail any impacts that superfast broadband connectivity is having on your business over the longer-term.

The research will consist of two survey waves to ensure we collect evidence of any ongoing impacts of superfast broadband on your business. This interview is the first wave and we will contact you again in early 2015 to arrange conducting the second survey wave.

- All findings will be made anonymous and your name and that of your organisation will not appear in the research report without your prior permission.
- You can withdraw from the survey at any time and this will not affect your relationship with Cornwall Development Company.
- Do you have any questions before I begin?

### TO BE FILLED IN PRIOR TO INTERVIEW

- S1. Sample type:**
- Quarterly Business Survey
  - Web Survey
  - Case Study
  - MBA Project Participant
  - Other (e.g. Invest in Cornwall)
- S2. IF COMPLETED QUARTERLY BUSINESS SURVEY: Was permission given to link data to contact details?**
- Yes
  - No
- S3. IF COMPLETED QUARTERLY BUSINESS SURVEY: In which wave of the QBS was the respondent interviewed?**
- Wave 1
  - Wave 2
  - Wave 3

## ASK RESPONDENT

**S4. Firstly, can I just check, when did your business connect to superfast broadband?  
PROBE FOR BEST ESTIMATE**

- Less than 6 months ago CLOSE
- 6 to 12 months ago
- 12 to 18 months ago
- More than 18 months ago

**S7. And, can I just check, has your business had superfast broadband since the business was established? [INTERVIEWER - ESTABLISH WHETHER BUSINESS HAS BEEN CONNECTED TO SUPERFAST SINCE BUSINESS WAS FIRST SET UP]**

- Yes
- No

**S8. How influential was connecting to superfast broadband in your decision to set up your business?**

**READ OUT/SINGLE CODE**

- Not at all influential
- Influential to some extent
- Influential to a great extent

**S9. Which of the following statements most closely match how superfast broadband influenced the development of your business. READ OUT, SINGLE CODE**

- I had plans to set up my own business anyway
- I had plans to set up my own business anyway, but have done it sooner because of superfast broadband
- I had not considered setting up my own business before superfast broadband
- (None of these)
- Other
- (Don't know)

Please specify

**S10. Please could you provide further details about the influence of connecting to superfast broadband in your decision to set up your business. PROBE FULLY**

**S5. Does your business have any offices outside of Cornwall?**

- Yes
- No

If yes: Roughly what percentage of your employees are based outside of Cornwall?

**S6. Which of the following best describes your business? READ OUT**

- Sole trader
- Partnership
- Business with employees

## Impact on Business Practices and Performance

**NOTE TO INTERVIEWER: If business completed QBS and approved their contact details being linked to their response, insert data from Q7/Q8/Q9 below.**

**For others, ask full questions.**

**A1. So, thinking about your business' use of superfast broadband, do you use superfast broadband for any of the following? READ OUT, MULTI CODE**

	Yes	No
Send and receive large file (for example, video and graphic files)	<input type="checkbox"/>	<input type="checkbox"/>
'Cloud computing ' services (for example, software applications hosted remotely)	<input type="checkbox"/>	<input type="checkbox"/>
Remote data storage	<input type="checkbox"/>	<input type="checkbox"/>
Internet telephony - Voice over Internet Protocol	<input type="checkbox"/>	<input type="checkbox"/>
Video conferencing	<input type="checkbox"/>	<input type="checkbox"/>
Web conferencing/collaboration (for example, many users sharing a workspace)	<input type="checkbox"/>	<input type="checkbox"/>
Virtual private networks	<input type="checkbox"/>	<input type="checkbox"/>
Remote access (for example, accessing your desk top remotely from an IPad)	<input type="checkbox"/>	<input type="checkbox"/>
Social media	<input type="checkbox"/>	<input type="checkbox"/>
Multiple connections (that is, more than one device connected at the same time)	<input type="checkbox"/>	<input type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>
Please specify		

**A2. And did you use broadband to do this before you upgraded to superfast? READ OUT, MULTI CODE**

	Yes	No
Send and receive large file (for example, video and graphic files)	<input type="checkbox"/>	<input type="checkbox"/>
'Cloud computing ' services (for example, software applications hosted remotely)	<input type="checkbox"/>	<input type="checkbox"/>
Remote data storage	<input type="checkbox"/>	<input type="checkbox"/>
Internet telephony - Voice over Internet Protocol	<input type="checkbox"/>	<input type="checkbox"/>
Video conferencing	<input type="checkbox"/>	<input type="checkbox"/>
Web conferencing/collaboration (for example, many users sharing a workspace)	<input type="checkbox"/>	<input type="checkbox"/>

Virtual private networks	<input type="checkbox"/>	<input type="checkbox"/>
Remote access (for example, accessing your desk top remotely from an iPad)	<input type="checkbox"/>	<input type="checkbox"/>
Social media	<input type="checkbox"/>	<input type="checkbox"/>
Multiple connections (that is, more than one device connected at the same time)	<input type="checkbox"/>	<input type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>
Additional information on other:		

---

**A3. As a result of your upgrade to superfast broadband do you use this function more, less or the same as before you upgraded?**

	<i>More</i>	<i>Less</i>	<i>Same</i>
Send and receive large file (for example, video and graphic files)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
'Cloud computing ' services (for example, software applications hosted remotely)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Remote data storage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Internet telephony - Voice over Internet Protocol	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Video conferencing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Web conferencing/collaboration (for example, many users sharing a workspace)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Virtual private networks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Remote access (for example, accessing your desk top remotely from an iPad)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Social media	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Multiple connections (that is, more than one device connected at the same time)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Additional information on other:			

---

**A4. IF COMPLETED QBS (WAVES 1 AND 2 ONLY) AND NOT INDICATED USAGE: In your response to the quarterly business survey you indicated that you did not use the following functions. Does your business use these functions now? READ OUT**

	<i>Yes</i>	<i>No</i>
Send and receive large file (for example, video and graphic files)	<input type="checkbox"/>	<input type="checkbox"/>
'Cloud computing ' services (for example, software applications hosted remotely)	<input type="checkbox"/>	<input type="checkbox"/>
Remote data storage	<input type="checkbox"/>	<input type="checkbox"/>

Internet telephony - Voice over Internet Protocol	<input type="checkbox"/>	<input type="checkbox"/>
Video conferencing	<input type="checkbox"/>	<input type="checkbox"/>
Web conferencing/collaboration (for example, many users sharing a workspace)	<input type="checkbox"/>	<input type="checkbox"/>
Virtual private networks	<input type="checkbox"/>	<input type="checkbox"/>
Remote access (for example, accessing your desk top remotely from an iPad)	<input type="checkbox"/>	<input type="checkbox"/>
Social media	<input type="checkbox"/>	<input type="checkbox"/>
Multiple connections (that is, more than one device connected at the same time)	<input type="checkbox"/>	<input type="checkbox"/>

**A5. IF COMPLETED QBS WAVE 1 AND INDICATED USAGE: In your response to the quarterly business survey in Autumn 2012 you indicated that your business uses the following functions. Do you use these functions more, less or the same as you did in Autumn 2012**

	<i>More</i>	<i>Less</i>	<i>Same</i>
Send and receive large file (for example, video and graphic files)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
'Cloud computing ' services (for example, software applications hosted remotely)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Remote data storage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Internet telephony - Voice over Internet Protocol	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Video conferencing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Web conferencing/collaboration (for example, many users sharing a workspace)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Virtual private networks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Remote access (for example, accessing your desk top remotely from an iPad)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Social media	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Multiple connections (that is, more than one device connected at the same time)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments			

**A6. IF COMPLETED QBS WAVE 2 AND INDICATED USAGE: In your response to the quarterly business survey in Spring 2013 you indicated that your business uses the following functions. Do you use these functions more, less or the same as you did in Spring 2013?**

	<i>More</i>	<i>Less</i>	<i>Same</i>
Send and receive large file (for example, video and graphic files)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
'Cloud computing ' services (for example, software applications hosted remotely)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Remote data storage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Internet telephony - Voice over Internet Protocol	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Video conferencing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Web conferencing/collaboration (for example, many users sharing a workspace)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Virtual private networks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Remote access (for example, accessing your desk top remotely from an IPad)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Social media	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Multiple connections (that is, more than one device connected at the same time)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments			

**A7. IF COMPLETED QBS AND INDICATED INCREASED USAGE/USAGE: In your response to either the quarterly business survey or the previous questions you indicated that your business now uses the following functions more frequently than you did before you were connected. How has this benefitted your business, if at all?**

**IF DIDNT COMPLETE QBS: You have indicated that your business now uses the following functions more frequently than you did before you were connected. How has this benefitted your business, if at all?**

**NOTE TO INTERVIEWER: If any of the functions are in red they should be prioritised.**

Send and receive large files (for example, video and graphic files) \_\_\_\_\_  
 \_\_\_\_\_

**'Cloud computing ' services (for example, software applications hosted remotely)** \_\_\_\_\_  
 \_\_\_\_\_

Remote data storage \_\_\_\_\_

Internet telephony - Voice over Internet Protocol \_\_\_\_\_  
 \_\_\_\_\_

**Video conferencing**

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**Web conferencing/collaboration (for example, many users sharing a workspace)**

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Virtual private networks

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Remote access (for example, accessing your desk top remotely from an iPad)

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Social media

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Multiple connections (that is, more than one device connected at the same time)

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Other

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**NOTE TO INTERVIEWER: If business completed QBS and approved their contact details being linked to their response, insert data from Q12.a and Q12.c below.**

**For others, ask full questions.**

**A8. And still thinking about your business’s use of superfast broadband, do you use superfast broadband for any of the following business processes? READ OUT FOR EACH ONE WHERE RESPONSE IS YES, ASK FOLLOW UP QUESTIONS:**

	<i>Use function</i>	<i>Don't use function</i>
Online sales	<input type="checkbox"/>	<input type="checkbox"/>
Online marketing (e.g. e-newsletters, mailing lists, pay per click, search engine optimisation etc.)	<input type="checkbox"/>	<input type="checkbox"/>
Logistics/supply chain	<input type="checkbox"/>	<input type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>
Please specify:		

---

**A8.B.a As a result of your upgrade to superfast broadband do you use this function more, less or the same as before you upgraded?**

	<i>More</i>	<i>Less</i>	<i>Same</i>
Online sales	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Online marketing (e.g. e-newsletters, mailing lists, pay per click, search engine optimisation etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Logistics/supply chain	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**A9. REPEAT FOR ALL ITEMS ABOVE**  
**IF COMPLETED QBS AND INDICATED INCREASED USAGE:** In your response to the quarterly business survey you indicated that your business now uses the following functions more frequently than you did before you were connected. How has this benefitted your business, if at all?  
**IF DIDNT COMPLETE QBS:** You have indicated that your business now uses the following functions more frequently than you did before you were connected. How has this benefitted your business, if at all?

Online sales \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Online marketing (e.g. e-newsletters, \_\_\_\_\_  
 mailing lists, pay per click, search \_\_\_\_\_  
 engine optimisation etc.) \_\_\_\_\_  
 \_\_\_\_\_

Logistics/supply chain \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Other \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**NOTE TO INTERVIEWER:** If business completed QBS and approved their contact details being linked to their response, insert data from Q12.d below. For others, ask full questions.

**A10. How much would you agree or disagree with the following statements about the impact that superfast broadband has had on your business to date?**  
**Superfast broadband has.... READ OUT**

	<i>Strongly agree</i>	<i>Slightly agree</i>	<i>Slightly disagree</i>	<i>Strongly disagree</i>	<i>Don't know</i>	<i>Doesn't apply</i>
Enabled the business to grow	<input type="checkbox"/>					
Helped to generate new sales, win new business contracts, and access new markets or customers	<input type="checkbox"/>					
Helped the business to develop new goods or services	<input type="checkbox"/>					
Allowed the business to work in new and different ways, e.g. cloud computing	<input type="checkbox"/>					
Saved the business time and/ or money	<input type="checkbox"/>					
Allowed yourself/employees to work remotely and/or more efficiently from home	<input type="checkbox"/>					

**A11. REPEAT FOR ALL ITEMS ABOVE**  
**IF COMPLETED QBS AND INDICATED INCREASED USAGE:** In your response to the quarterly business survey you indicated that superfast has had the following impacts on your business How has superfast done this?

**IF DIDN'T COMPLETE QBS:** You have indicated that superfast has had the following impact on your business. How has superfast done this?

Enabled the business to grow \_\_\_\_\_

Helped to generate new sales, win new business contracts, and access new markets or customers \_\_\_\_\_

Helped the business to develop new goods or services \_\_\_\_\_

**PROBE:** Benefits to the business

Allowed the business to work in new and different ways, e.g. cloud computing \_\_\_\_\_

**PROBE:** Benefits to the business

Saved the business time and/ or money \_\_\_\_\_

Allowed yourself/employees to work remotely and/or more efficiently from home [IF SOLE TRADER/PARTNERSHIP

PROBE WHETHER SUPERFAST HAS ENABLED THEM TO PROFESSIONALLY DEVELOP THOSE LIVING IN REMOTE RURAL AREAS/WITH CARING RESPONSIBILITIES/MOBILITY ISSUES - A12]

**A12. IF AGREE OR STRONGLY AGREE THAT SUPERFAST HAS ENABLED EMPLOYEES TO WORK FROM HOME:** You indicated that superfast has helped enable your employees to work remotely from home. Has this enabled your business to attract, retain and/or professionally develop employees from the following groups?

**NOTE:** Professional development may include promotion, or giving increased responsibility.

	Yes	No
Employees living in remote rural areas	<input type="checkbox"/>	<input type="checkbox"/>
Employees with caring responsibilities	<input type="checkbox"/>	<input type="checkbox"/>
Employees with mobility issues	<input type="checkbox"/>	<input type="checkbox"/>

*Please provide details:* **PLEASE NOTE: UNDER THE DATA PROTECTION ACT YOU NEED TO HAVE SOUGHT AND GAINED YOUR EMPLOYEES PERMISSION BEFORE PROVIDING SPECIFIC INFORMATION ON ANY CARING RESPONSIBILITIES AND DISABILITIES THEY MAY HAVE.**

**A13. IF AGREE OR STRONGLY AGREE THAT SUPERFAST HAS ENABLED EMPLOYEES TO WORK FROM HOME: Do you think superfast makes it easier for businesses to attract, retain and professionally develop employees from these groups?**

Employees living in remote rural areas \_\_\_\_\_  
 \_\_\_\_\_

Employees with caring responsibilities \_\_\_\_\_  
 \_\_\_\_\_

Employees with mobility issues \_\_\_\_\_  
 \_\_\_\_\_

**A14. Have you engaged in collaborative working since connecting to superfast? (e.g. joint/partnership working - informal networks/alliances, joint delivery of projects**

- Yes
- No

To what extent did superfast enable you to engage in collaborative working (e.g. web or video conferencing with partners/collaboration on digital innovation):

\_\_\_\_\_  
 \_\_\_\_\_

**A15. In your opinion, are there any opportunities for business innovation linked to the availability of superfast broadband?**

**PROBE:** the nature of these opportunities (e.g. process, product or service innovation);  
**PROBE:** examples from their own business; opportunities or experiences with collaborative working

\_\_\_\_\_  
 \_\_\_\_\_

**A16. Has the business relocated to Cornwall since 2010?**

- Yes
- No

IF YES: Where did it relocate from?

\_\_\_\_\_  
 \_\_\_\_\_

**A17. IF BUSINESS RELOCATED TO CORNWALL: On a scale from "very important" to "not at all important", how important do you think the availability of superfast was as a factor in the decision to relocate the business to Cornwall?**

- Very important
- Quite important
- Neither/ nor
- Not very important
- Not at all important
- (Don't know)

**A18. Why do you say that the availability of superfast was important/ not important in the decision to relocate to Cornwall?**

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## Financial Impact

The next set of questions cover company performance indicators, including employee numbers, and turnover and profit information. This is used to help estimate what impact superfast is having on businesses and to what extent business growth can be attributed to superfast.

**B1. What is the current cost per year of your connection to Superfast?**

---

**B2. Have you had to incur any other costs in order to connect to and utilise Superfast?**  
e.g. training, recruitment or relocation costs.

- Yes
- No
- (Don't know)

**B3. What types of costs were they?**

- Training costs
- Staff recruitment costs
- Relocation costs
- Other

*Please specify:*

---

**B4. Please state approximately how much this/these elements have cost the company:**  
Training costs

---

Staff recruitment costs

---

Relocation costs

---

Other

---

**B5. Including yourself, how many people did your business employ within Cornwall before connecting to superfast? Please answer based on FTEs.**

**PROBE:** for precise figures but if not possible ask for an approximate figure or range

---

**B6. Were any of these on zero hour contracts?**

- Yes
- No
- (Don't know)

*IF YES TO B6: Please state FTE estimate:*

---

**B7. Were there any people working for you on the basis of a freelance contract?**

- Yes
- No
- (Don't know)

*IF YES TO B7: Please state FTE estimate:*

---

**B8. Including yourself, how many people does your business now employ within Cornwall based on FTE?**

**PROBE:** for precise figures but if not possible ask for an approximate figure or range  
Employees: \_\_\_\_\_

And of these, employees with zero-hour contracts: \_\_\_\_\_

Do you have any freelancers and contractors: \_\_\_\_\_

**B9. Including yourself, how many do you estimate your business would have employed in Cornwall based on FTE if you had not been connected to Superfast?**

**PROBE:** for precise figures but if not possible ask for an approximate figure or range  
Employees: \_\_\_\_\_

And of these, employees with zero-hour contracts: \_\_\_\_\_

Do you have any freelancers and contractors: \_\_\_\_\_

**B12. INTERVIEWER - ARE FIGURES DIFFERENT (B8/B9)?**

- Yes
- No

**B10. IF FIGURES ARE DIFFERENT: Why do you think that your employee numbers would have been different had you not connected to superfast?**

**PROBE:** If numbers have reduced probe whether this was due to any efficiency gains.

---



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**B11. IF NOT COMPLETED QBS WAVE 3: Have you safeguarded any jobs since being connected to Superfast? (e.g. jobs that were forecast to be at risk, and are now no longer at risk of being lost within a year)**

- Yes
- No
- (Don't know)

IF YES: How many FTE positions has your business safeguarded?

---

**B12. What was the annual operating profit or loss of your business in....? IF MULTI SITE BUSINESS: Please answer based on all your organisation's sites in Cornwall.**

**PROBE:** for precise figures but if not possible ask for an approximate figure or range  
 The last complete financial year: \_\_\_\_\_

The last complete financial year \_\_\_\_\_  
 before you were connected to  
 Superfast:

**B13. What was the annual depreciation amount of your business in...? IF MULTI SITE BUSINESS: Please answer based on all your organisation's sites in Cornwall.**

**PROBE:** for precise figures but if not possible ask for an approximate figure or range  
 The last complete financial year: \_\_\_\_\_

The last complete financial year \_\_\_\_\_  
 before you were connected to  
 Superfast:

**B14. What was the annual employee costs of your business in...? IF MULTI SITE BUSINESS: Please answer based on all your organisation's sites in Cornwall.**

**PROBE:** for precise figures but if not possible ask for an approximate figure or range  
 The last complete financial year: \_\_\_\_\_

The last complete financial year \_\_\_\_\_  
 before you were connected to  
 Superfast:

**B15. In the last complete financial year what percentage of your competitors were based in Cornwall?**

- 1-<10%
- 10-<20%
- 20-<40%
- 40<60%
- 60-<80%
- 80-100%
- (Don't know)

*Insert more precise figure if available:*

---



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## Other Impacts from Superfast

**C1. How would you describe the IT related skills levels of yourself/your employees in your organisation?**

**PROBE:** Whether they feel their IT related skills levels are adequate or in need of development. **PROMPTS:** E-commerce and digital marketing; website design; video conferencing; social media  
**PROBE:** skills needs; potential to be met by the Cornish workforce

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**C2. Does your business require any training to help you further exploit superfast?**

- Yes
- No
- (Don't know)

**IF YES: Please provide details:**

---



---

**C3. Has your business premises' energy use changed since connecting to Superfast?**

- Increased
- Reduced
- Stayed the same
- (Don't know)

Why has it changed? **PROMPTS:** use of cloud computing; smarter and collaborative working; increased homeworking (reduction in office energy use)

---



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**C4. Has your business' travel usage changed since connecting to Superfast?**

- Increased
- Reduced
- Stayed the same
- (Don't know)

Why has it changed? **PROMPTS:** use of video (is it in addition to or a substitute for face-to-face meetings?); increased homeworking (reduction in employee travel).

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## Concluding Questions

**D1. Is your business looking to exploit superfast broadband further? (e.g. use superfast to develop new products, services, processes and ways of working)**

- Yes
- No
- (Don't know)

**D2. IF YES: How do you intend to further exploit superfast?**  
**PROBE:** Timeframes, expected outcomes and benefits, any support needs.

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**D3. IF NO: Why do you say that?**  
**PROBE:** whether they feel they have utilised all the potential benefits or whether there are issues preventing the business from further utilising superfast (e.g. skills gaps, funding).

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**D4. Is there anything else you would like to add about your experiences of Superfast?**  
**PROBE:** customer satisfaction

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**D5. IF NOT COMPLETED QBS/ NOT AGREED TO LINK CONTACT DETAILS: In what industry does your business mainly operate?**

- Public administration and defence
- Finance and insurance
- Agriculture, forestry and fishing
- Mining and quarrying
- Manufacturing
- Electricity, gas and air-conditioning supply
- Water supply and sewerage
- Waste management and remediation
- Construction
- Wholesale and retail trade
- Repair of motor vehicles
- Transport and storage
- Accommodation and food services
- Information and communication
- Real estate
- Professional, scientific and technical activities
- Administration and support services
- Education
- Health and social work
- Arts, entertainment and recreation
- Other support services
- (Don't know)

IF OTHER: Please specify

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**Thank you very much for giving up your time to participate in this interview.  
 As mentioned we will contact you again in early 2015 to arrange a further  
 interview.**

## Appendix Two

### Attributable GVA Estimates

The figure for attributed GVA and FTE increases was calculated by deducting the following:

- **Deadweight:** refers to outcomes which would have occurred without intervention. This was calculated by using the estimates which respondents gave for FTE in the absence of superfast.
- **Leakage:** estimates the proportion of an intervention's impact which is likely to have "leaked" from the target area, in this case Cornwall. For example a businesses may use increased profits resulting from superfast to employ new staff in another region.

The GVA figures were based on the businesses as a whole and not just their Cornwall operations, so some of the total GVA change may have led to outcomes outside of the county. In order to account for leakage, the proportion of a business's employees based outside of Cornwall was used as a proxy for the proportion of GVA likely to go outside Cornwall. This figure was then deducted from the total GVA figures provided.

In order to distinguish between GVA which was attributable and GVA which was deadweight the figures for attributed jobs and deadweight were used as a proxy. For GVA based on jobs created, the figure for total GVA change (after having accounted for leakage) was divided by eligible FTEs created for each business to generate an estimate for GVA per FTE. The GVA per FTE estimates were then divided between attributed and deadweight FTE.

A similar calculation was also made to estimate the figures for attributed GVA safeguarded. However in this case the GVA per FTE ratios were based on the total number of FTEs in the business before connecting to superfast divided by the total GVA figure after leakage.

Where GVA figures were not available, but the business had reported an increase in attributable and eligible FTE, the sectoral based estimates for FTE per GVA, used in the midterm evaluation report<sup>7</sup>, were applied instead. It should be noted, however that these figures assume a fixed level of labour productivity based on the sectoral average.

### Net GVA and Net FTE Estimates

The figure for net GVA and FTE also accounted for the following:

- **Displacement:** measures the extent to which the benefits of an intervention are offset by reductions of output or employment elsewhere. In this case, displacement could be seen if an increase in market share amongst the businesses surveyed leads to a decline in market share amongst competitors that are also based in Cornwall.
- **Multiplier:** measures the further economic activity (whether output or jobs), resulting from the creation of additional local economic activity.

<sup>7</sup> SERIO and Buckman Associates (2013), Superfast Cornwall Evaluation Final Midterm Report, November 2013. Available at <http://www.superfastcornwall.org/assets/file/Superfast%20Cornwall%20Evaluation%20Midterm%20FINAL%20Report.pdf>

In this report the percentage of competitors based in Cornwall (see Chart Five) was used as a proxy for displacement, although it should be noted that this may overstate displacement due to the absence of data on business sales. Where businesses could not provide data on competitors displacement was estimated at 19.5% which was the mean figure for displacement at a sub-regional level for "business development and competitiveness" according to BIS Occasional Paper No.1 "Research to Improve the Assessment of Additionality" Oct 2009.

For the multiplier, the report used the mean multiplier at the sub-regional level for "business development and competitiveness" (1.26) as estimated in BIS Occasional Paper No.1 "Research to Improve the Assessment of Additionality" Oct 2009.

While substitution was not explicitly accounted for, no businesses reported any costs associated with relocation from one part of Cornwall to the other in order to access superfast, therefore substitution should be minimal.

### **Labour Productivity Estimates**

GVA per FTE was used as the indicator for labour productivity. This was calculated by taking the estimates for business GVA within Cornwall (see above) for before connecting to superfast and currently, and dividing these by total FTE.

As noted above, only eligible FTE was used in the GVA per FTE calculations used to estimate attributed GVA. However as labour productivity is not an ERDF output for the programme, the GVA per FTE figures for labour productivity include zero hour contracts. This ensures that labour productivity is not overstated through the exclusion of hidden employees.



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