Supporting rural SMEs in the take up and use of broadband: what works?

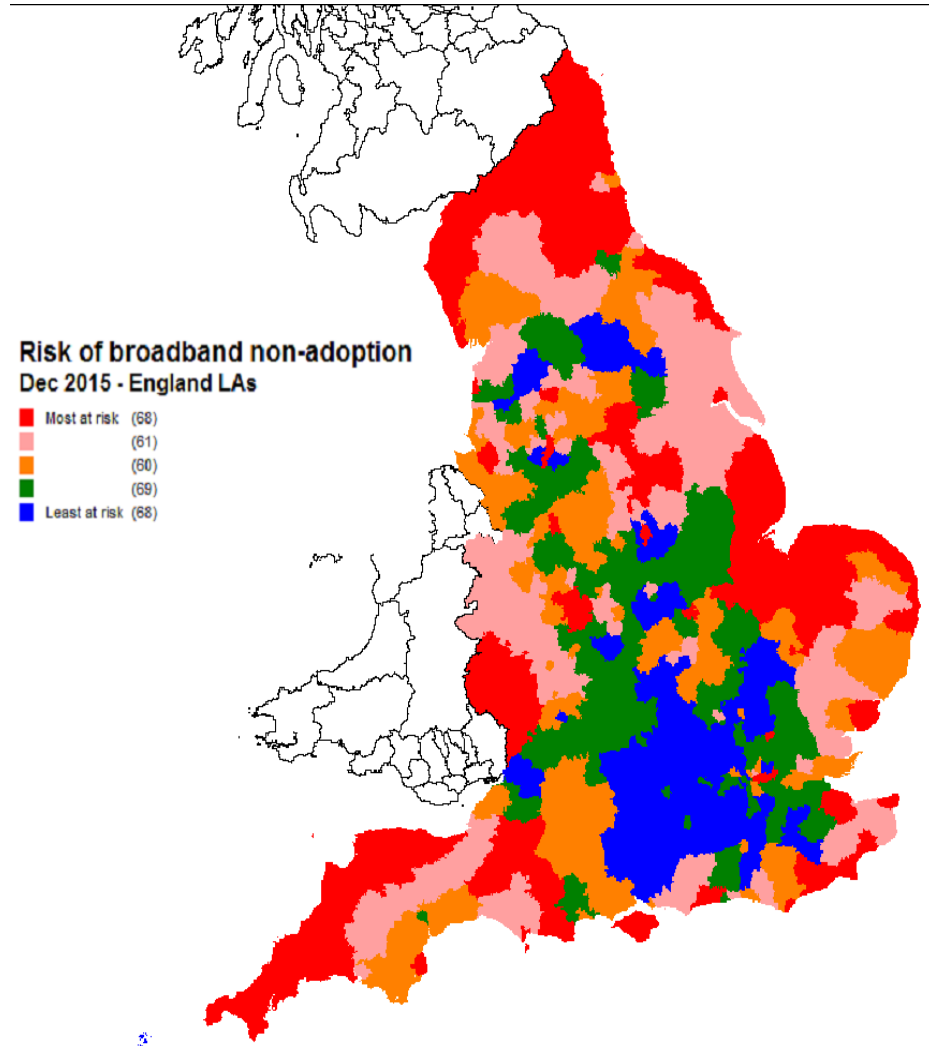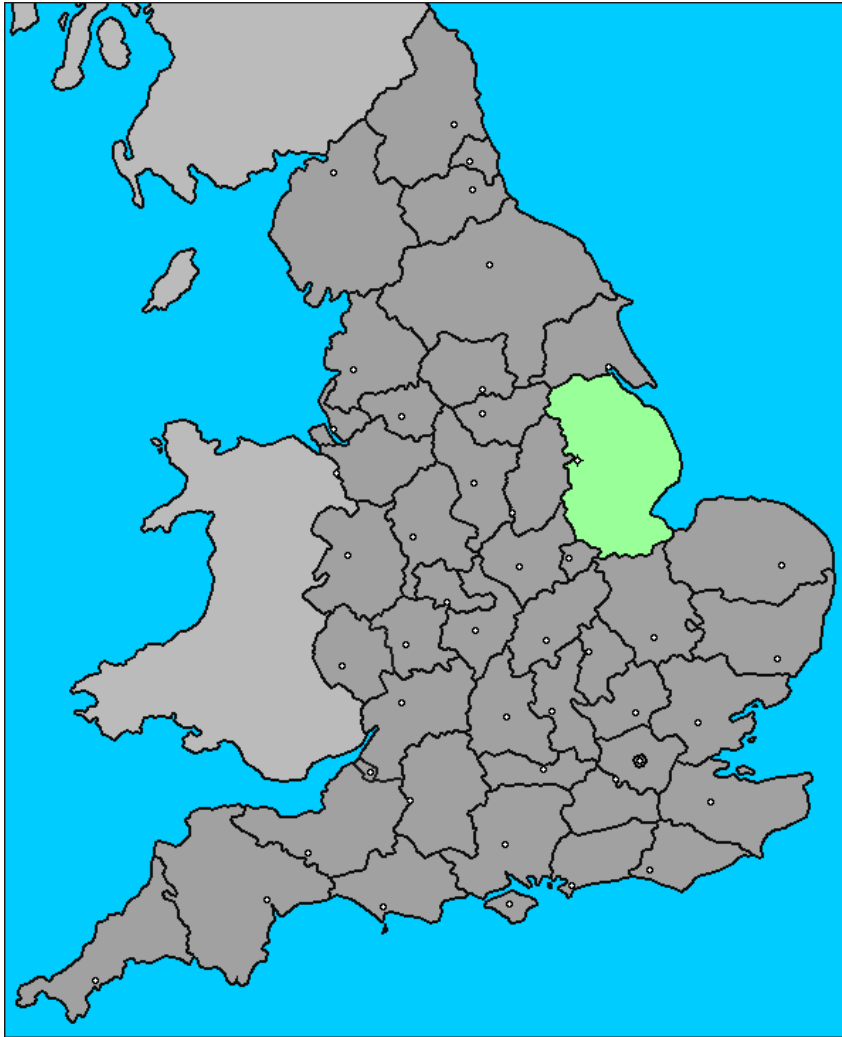Liz Price, Jim Shutt, Jessica Sellick

Introduction

Aim: To explore the effectiveness of demand-side approaches to stimulating take-up and use of broadband within SMEs

- Focus on the experiences of SMEs participating in an ERDF-funded programme ('*Onlincolnshire'*) designed to stimulate demand for broadband and take-up of broadband-enabled applications
- Two periods of policy intervention: 2003-2006 and 2011-2015
- Two phases of evaluation that focus on uses of broadband by SMEs, and the changes these have led to within the business
- Enables comparison of a number of different support models:
  - Connection subsidies
  - 1:1 technical support
  - Training workshops
  - Technology hubs

Policy Context

- ***Britain's Superfast Broadband Future (2010):*** vision for the UK to have the best superfast broadband network in Europe by 2015

- Broadband highlighted as a catalyst for SME growth and job creation.

- Not investing in the UK's broadband infrastructure = risk of 'digital divide' between rural and urban areas.

- ***Lincolnshire Broadband Plan (2011)*** investment in digital connectivity needed across Lincolnshire. 17% of the population received less than a 2mbps broadband service, and only 30% of the population were expected to benefit from private sector investment in superfast broadband.

- ***Superfast Broadband Programme (2013)*** investment to provide superfast broadband (at least 24mbps) to at least 95% of premises and universal access to a basic broadband (2mbps) by 2016.

- Programmes of support delivered by local authority using the brand ***Onlincolnshire (2003-2006 and 2011-2015)*** to promote take-up and use of broadband and superfast broadband, alongside infrastructure investment funded by Superfast Broadband Programme.

Lincolnshire: at risk of 'digital deprivation'

Risk of broadband non-adoption
Dec 2015 - England LAs

- Most at risk (68)
- (61)
- (60)
- (69)
- Least at risk (68)

Source: Point Topic, 2015

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Supporting SMEs to take up new technology: Literature

- Internet connectivity increasingly viewed as essential for SME competitiveness (Townsend et al, 2013; FSB, 2014; Czernich et al, 2011)

- Connectivity should be accompanied with practical training so that firms can take advantage of new technology (Martin, 2013), but…

- Training provided through government programmes judged by owner managers to lack perceived value (Jones, 2013)

- Advice provided by consultants judged to be most successful where addressing a specific issue or problem (Turok, 2000)

- Importance of "*strong and knowledge-based intensive tailoring of the advice received*" (Ramsden and Bennett, 2005)

- Fab labs and makerspacers provide the opportunity for knowledge-sharing between experts and community/SMEs but evidence of impact is sparse (Fleischmann et al, 2016)

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Onlincolnshire programmes of support

Phase 1 (2003-2006 - £15 million ERDF, 858 SMEs assisted)

- One-off £200 subsidy to encourage SMEs to connect to 2mbps broadband service;
- Subsidies of £100 per month to SMEs to encourage use of a symmetrical broadband service of more than 2mbps in selected locations;
- Free ICT diagnostic advice (30 hours per SME);
- Funding of ICT projects to SMEs up to a value of £10,000 or at least 50% of the cost.

Phase 2 (2011-2015 - £1.4 million ERDF, 135 SMEs assisted)

- 1:1 support (12 hours per SME)
- Networking and training events focused on applications of superfast broadband (12 hours per SME)
- Creation of 5 digital hubs where SMEs could access the latest digital equipment (12 hours per SME);

Evaluation Approach

Phase 1

- In-depth face-to-face qualitative interviews with 40 SMEs
- Structured telephone survey with 150 SMEs.

Phase 2

- In-depth face-to-face qualitative interviews with 5 SMEs
- Semi-structured telephone interviews with 49 SMEs.

The interviews explored: (i) drivers of broadband adoption; (ii) how broadband was being used within the business and the applications it supported; (iii) the effects of broadband adoption on the business in terms of sales, innovation, skills etc; and (iv) capacity issues, such as skills and knowledge of ICT, and the ability of SMEs to use new technology to its full potential.
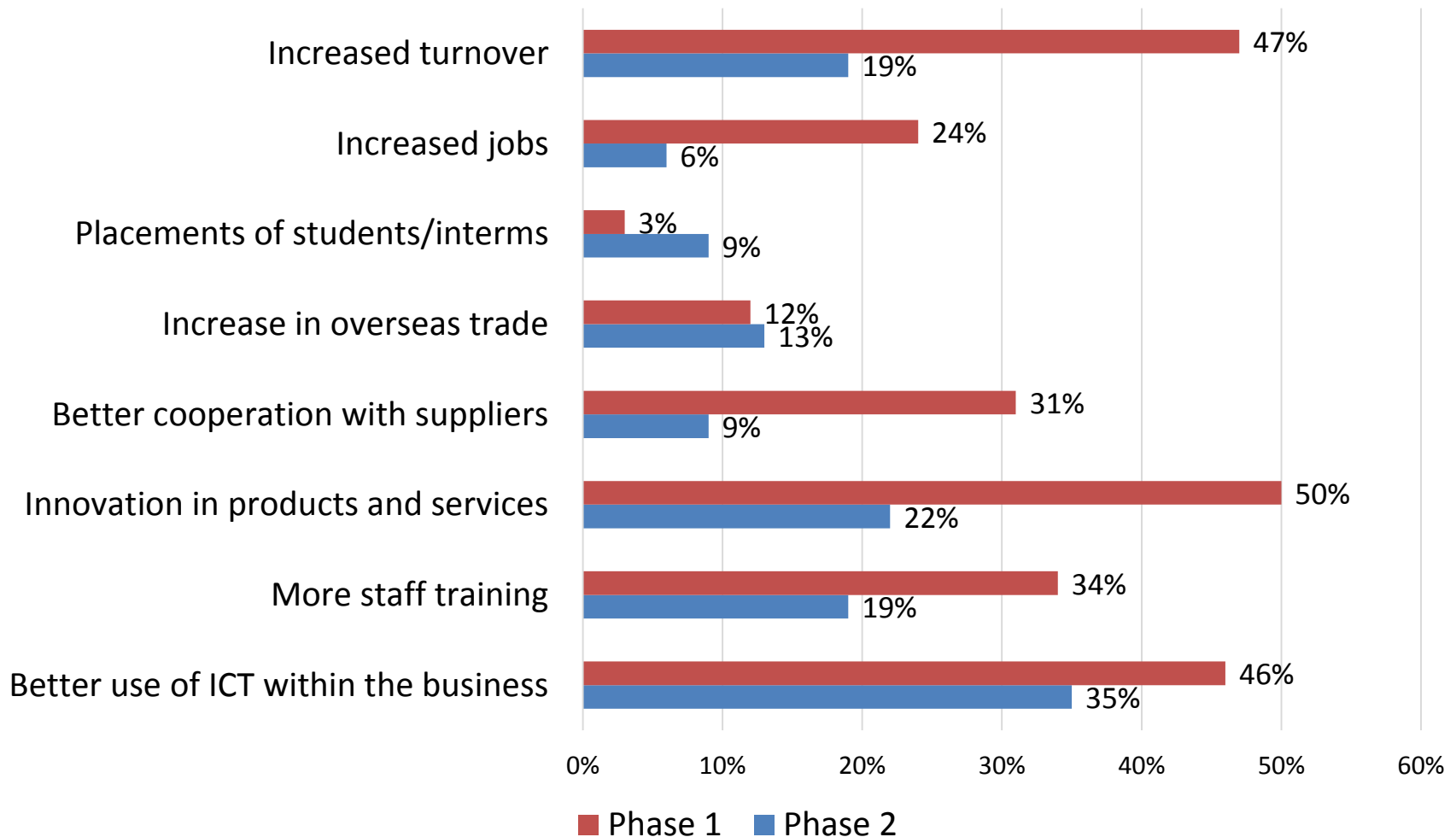
NOT longitudinal, but Phase 2 questionnaires included some of the Phase 1 questions
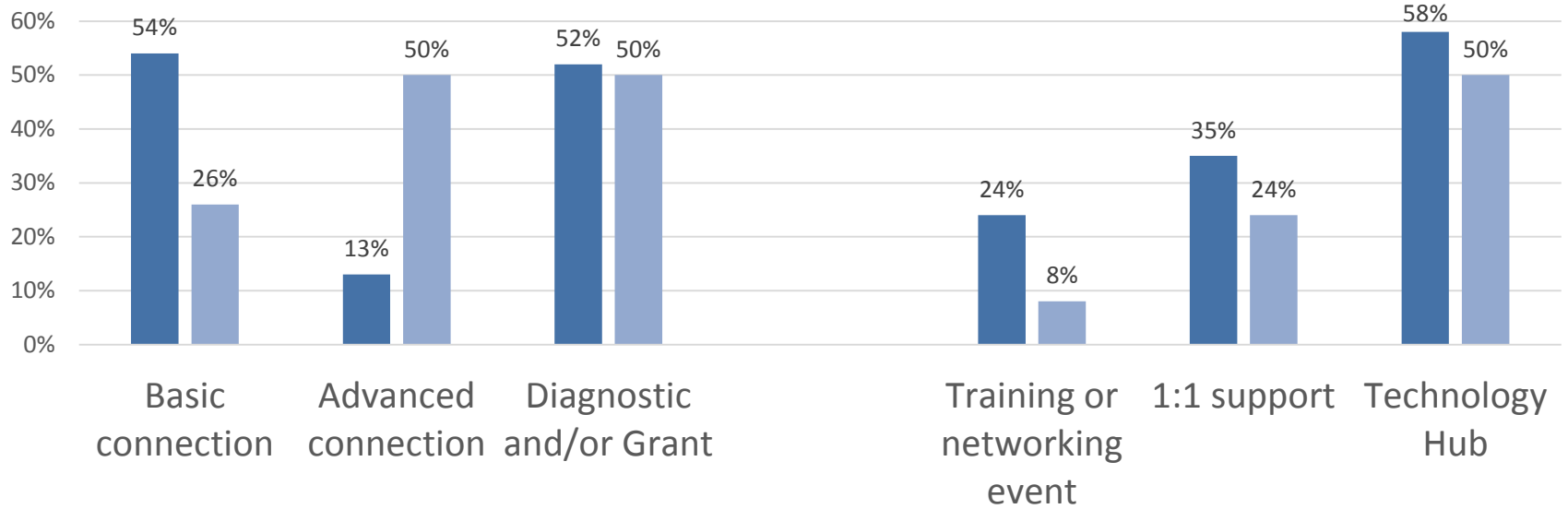
Usage of broadband internet among participating SMEs: 2007 and 2015

	2007	Rank	2015	Rank
Use of email	100%	1	100%	1
Use of the internet	100%	1	100%	1
Website development	56%	3	74%	5
Purchase goods online	45%	4	82%	2
Sell over the internet	20%	5	54%	7
Remote/home working	15%	6	63%	6
Market company/advertise online	13%	7	80%	3
Finding new suppliers	13%	7	26%	12
Use of video conferencing	8%	9	26%	12
Trade overseas	8%	9	11%	17
File sharing/online data storage	5%	11	37%	11
Send e-newsletters	2%	12	20%	15
Engage customers via social media			78%	4
Stream videos			48%	8
Email large files			46%	9
Cloud computing			41%	10
E-procurement as a buyer			26%	12
E-procurement as a supplier			20%	15
Providing wifi to guests/customers			9%	18
Develop an app			7%	19

Top chart:

	Basic connection	Advanced connection	Diagnostic and/or Grant	Training or networking event	1:1 support	Technology Hub
Better use of ICT within the business	54%	13%	52%	24%	35%	58%
Innovation in products and services	26%	50%	50%	8%	24%	50%

Bottom chart:

	Basic connection	Advanced connection	Diagnostic and/or Grant	Training or networking event	1:1 support	Technology Hub
More staff training	14%	25%	49%	12%	24%	25%
Engagement with HEIs	4%	5%	1%	8%	12%	8%

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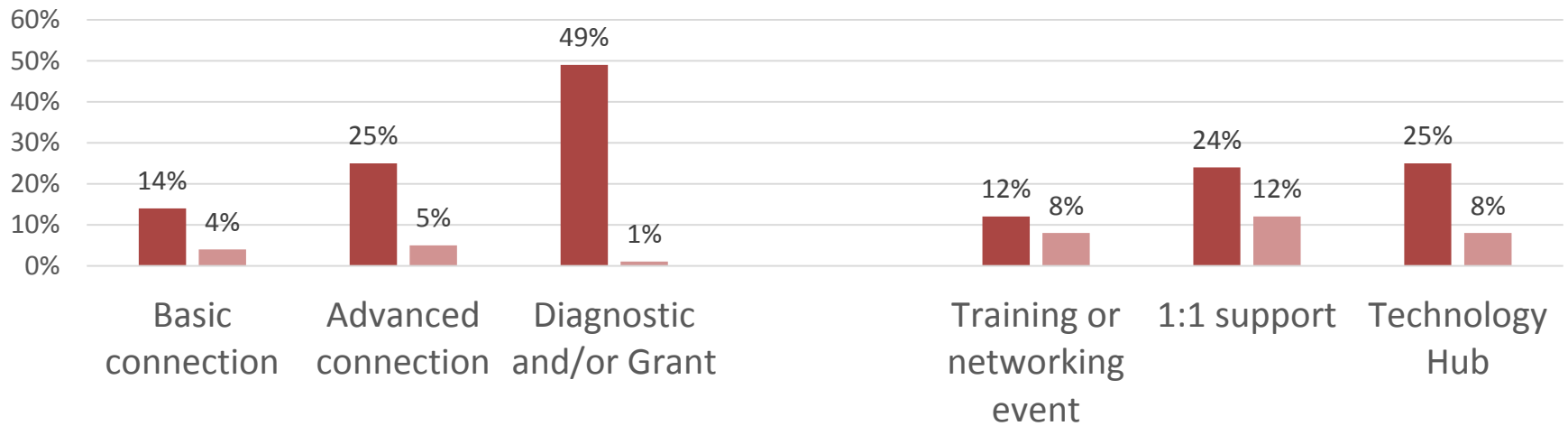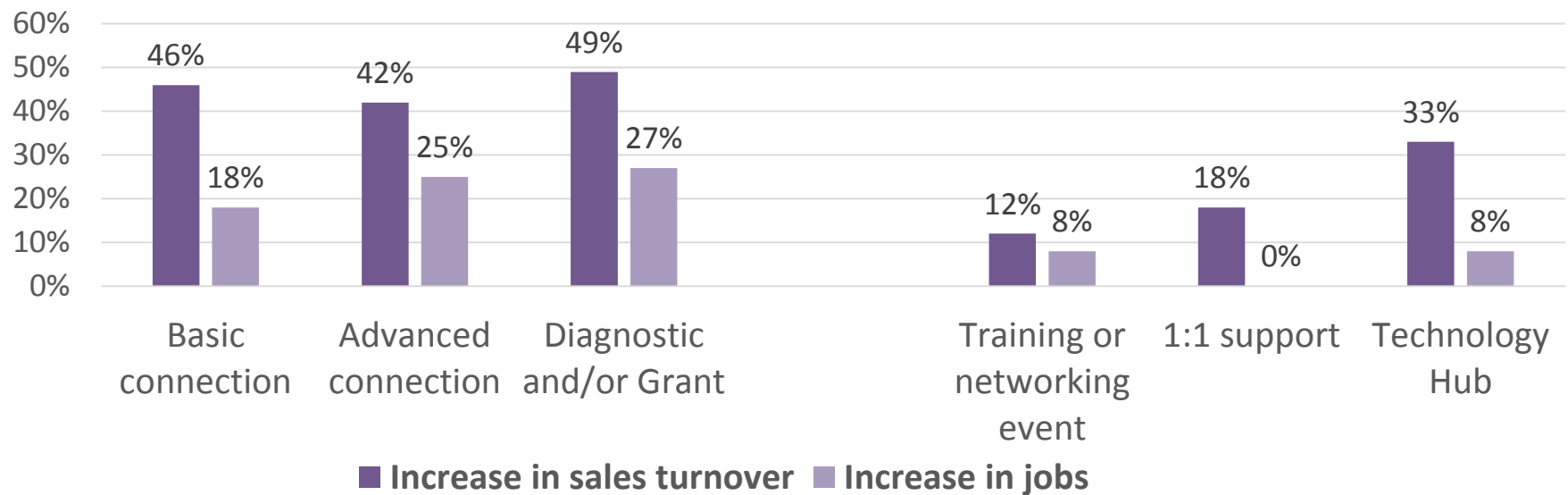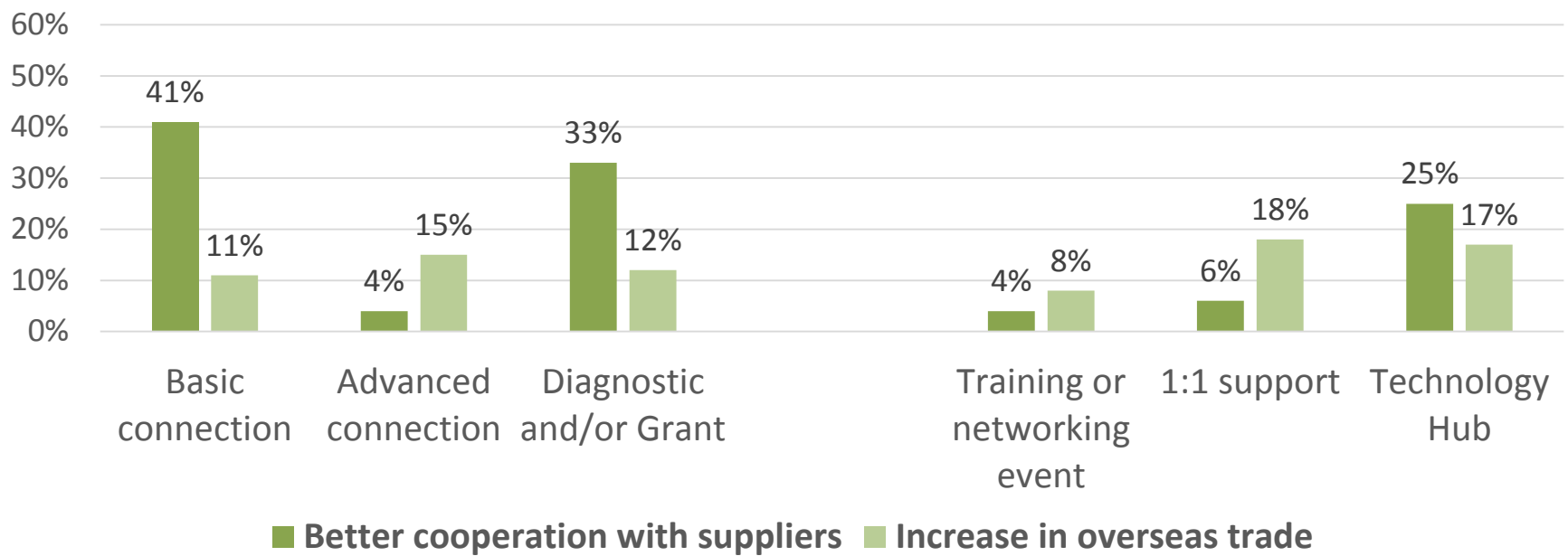
Quotations – Diagnostic Advice

"I phoned up and a gentleman came out to see us … he was a young man that had been trained in graphic design. It was quite interesting. He was quite helpful with stuff as we were trying to design a brochure at the time"

"The business plan that was devised with the consultant was fine and he signed it off and I agreed with it. It was a good idea but I expected Onlincolnshire to phone back and follow it up and talk me through what to do and how to do it, but that was 6 months ago and they still haven't phoned"

"As for the diagnostic, it was fine. He told me pieces on the technical side but I'm not interested in that. I knew what I wanted."

"He was ever so good, [name of advisor], but he just wasn't there for back up and we thought that he had let us down. He said it's not me, please don't think that I have let you down. I am bound, I am not allowed to."

Quotations - Training

"Nicely surprised that could get free training. Given clearer understanding about IT technology and what it can do. Training was focused and gave pointers in what direction to go. Has opened my eyes to possible new avenues (e.g. e-learning for clients, public sector bids)"

"So pleased to have had the training. It gave a starting point and has led to us offering online services which we had wanted to do. It was difficult for the trainer as they had different levels of IT knowledge of people on the courses."

"Some workshops were too simplistic and put people off. We had to wait until 2014 when [name of advisor] came to analyse our needs on a 1:1 basis. He gave insight into what was needed and signposted us to better, more useful support."

" I felt the course was made up to spend money. Too simple, and assumed I knew nothing."

Quotations – Technology Hubs

"[Need to ensure] continuation of Technology hubs... could develop 1:1 support more, only 12 hours which does not allow for business progression. Onlincolnshire needs to think about longer term outcomes for businesses, not just outputs."

"Hope hubs continue - able to visit and talk to someone about business. We can also hire an ipad for the day- very good service."

"More support/ training for manufacturing technology. How to make ideas work using IT technology e.g. CAD design skills training would be really useful. More 1:1 support. Better communication about what's on offer."

"Mablethorpe has great facilities- 3d printers, laser engraving programmes. Brilliant and interesting. Horncastle good too."

Summary

- A mixed ecology of support models provides options for the differing needs and IT abilities of SMEs

- Significant change observed simply through upgrading internet connection

- Tailored support (delivered via diagnostic support, hubs, and 1:1 advice) most likely to result in better use of ICT in the business

- But there is a need for an appropriate mix of IT and business expertise in advisors

- Training and networking events most helpful where tailored to the needs of the business (both IT aptitude and sector)

- Technology hubs well received by users; but struggled to link into target sectors (artists, manufacturers)

- The 12 hours support prescribed by ERDF is not helpful: too many hours for those needing training; too few hours for those needing specialist support or using the Technology Hubs