

# Superfast Broadband Business Exploitation Project

## *Digital Maturity Survey Report 2016*

### Summary

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WELSH ECONOMY RESEARCH UNIT  
*Yr Uned Ymchwil i Economi Cymru*



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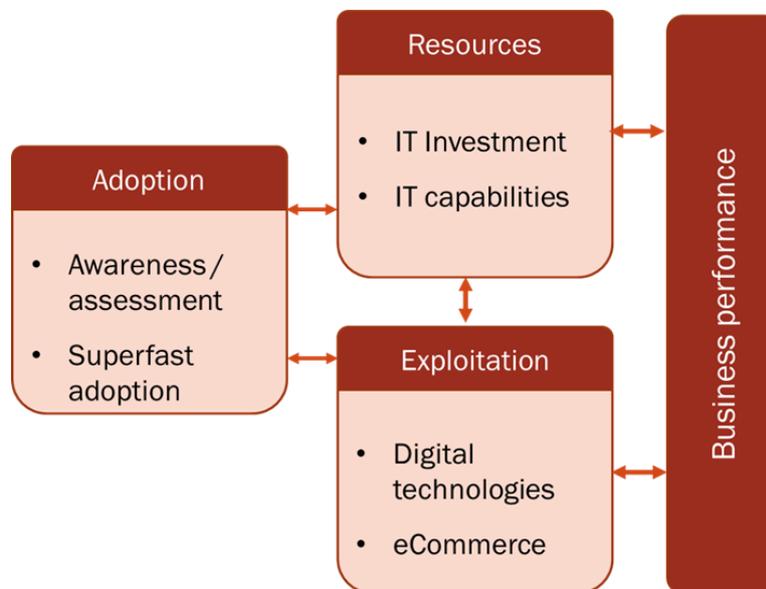
## Summary

The Welsh Government and Cardiff Business School were successful in 2015 in gaining European Regional Development Funding (ERDF) for a programme of business support to assist Small and Medium Enterprises (SMEs) across Wales to engage with superfast broadband infrastructure and associated technologies. This programme of support – the Superfast Broadband Business Exploitation (SBBE) programme - went live in January 2016 for a period of five years.

Cardiff Business School is providing a research and intelligence function surrounding the programme of business support. The first substantive output from the research and intelligence function was to provide a report on the methods to be followed in developing a *Digital Dashboard for Wales* and a resulting economic impact assessment showing how SMEs have benefited from services levered by superfast broadband (WERU, 2016).

This report then provides details of WERU's first annual *Digital Maturity Survey* (2016). It sets out the results from a survey of 166 businesses in Wales, including their adoption of superfast broadband, their infrastructure and IT capabilities, and performance. The framework adopted for the annual digital maturity survey is set out in the Figure 0-1 below. This framework has been developed from a review of existing studies on digital maturity, and is intended to reflect the processes by which superfast broadband adoption both shapes, and is shaped by a businesses' resources, the use and exploitation of broadband, and the subsequent performance impact.

**Figure 0-1 Digital maturity framework**



The main findings of the Digital Maturity Survey 2016 are that:

- Most SMEs that participated in the survey have standard broadband, while only a third have adopted superfast broadband (defined as SMEs being able to achieve download speeds of at least 24Mbps). The majority of standard broadband users, however, are aware of, or interested in superfast broadband. Superfast broadband adoption rates vary significantly by business size, industry sector, geographical area and region. SMEs with superfast broadband are more likely to engage in innovation activity than standard broadband users. Innovation focus, however, is not influenced by broadband type, with both standard and superfast broadband users innovating in new service and products.
- Only 15% of responding businesses had a dedicated IT budget. Although medium sized businesses have the highest average expenditure on broadband subscriptions in absolute terms, micro businesses have a higher average spend per employee on monthly broadband subscriptions. As businesses grow larger, high IT investment does not lead to improvements in performance amongst respondents.
- Most SMEs have access to staff with adequate IT skills and capabilities. Nearly 60% of sampled SMEs employed staff with intermediate and above IT skills, 50% of SMEs have staff with knowledge of using cloud enabled services at business, and nearly two thirds of businesses in the whole sample have access to IT support.
- SMEs with high IT capability – defined by the level of SMEs’ human IT-related resources - are concentrated in the information and communication and business services sectors. Micro and young SMEs, however, are the most digitally advanced businesses; yet their access to superfast broadband was reported to be constrained by its high associated costs.
- SMEs are more confident in using e-commerce than wider digital technologies. Even businesses with high IT capability find it difficult to successfully implement digital technologies in their business. Overall, the more digitally mature businesses in the sample tended to perform better in terms of growth and innovation.

The key findings from the research are further distilled in the *Digital Dashboard 2016* (Figure 0-2 below).

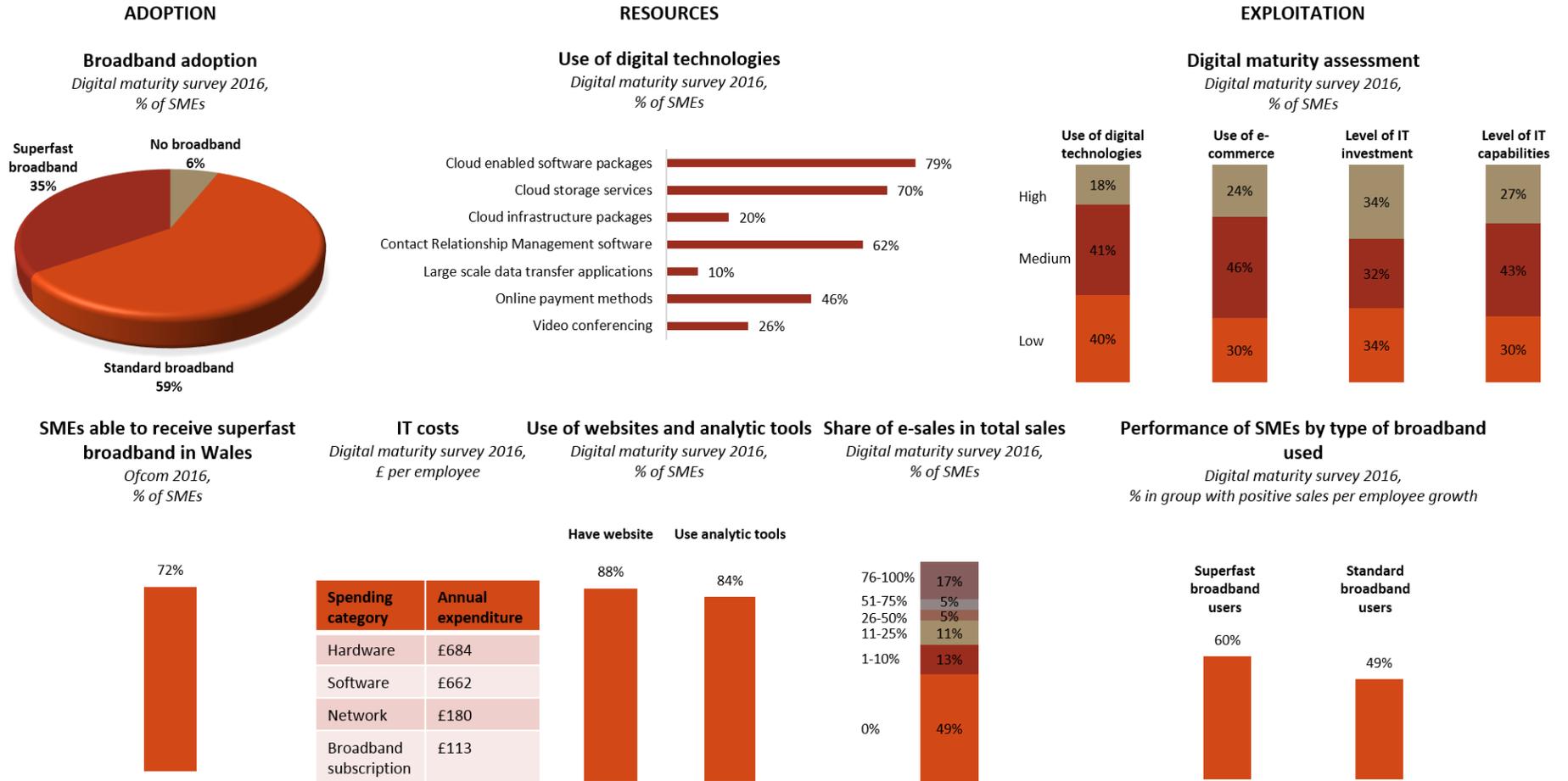
The context for the research and the wider Welsh Government Superfast Broadband Business Exploitation programme is that business productivity in Wales is far lower than that in competing regions of the UK and wider European Union, and with this one explanation of the gross value added per capita gap between Wales and adjacent parts of the UK. Transport and education infrastructure impacts business productivity but so can access to the services offered on superfast broadband platforms. The economic impact analysis that follows from this report will seek to better quantify these types of connections, using the survey findings to help develop estimates of the all-Wales outcomes levered by superfast broadband.

Alongside the development of the current report will be a series of case studies of SMEs. The case studies will be used to assess in more detail SME use of the new technology, and how this translates into innovation in terms of products and processes, and then links to improved business productivity and performance. This more detailed case work, and economic impact analysis is essential in identifying how access to superfast broadband resources can contribute to economy-wide outcomes, and the types of intervention that have the strongest effects on SME performance.

While these types of issues have been described in the current report, more research is needed to drill down into these findings and to develop policy relevant outcomes. Care is needed, however, in using, and then generalising from the findings in the first Digital Maturity Survey. Of particular concern is the low level of responses from some sectors of the regional economy. The research planned during the coming year will seek to address such issues.

*This report was written by Dylan Henderson, Calvin Jones, Max Munday, Laura Norris, Annette Roberts, Neil Roche, and Anna Scedrova. Results of the survey and other research activities can be found at <http://www.cardiff.ac.uk/superfast-broadband-project>*

**Figure 0-2 Digital dashboard 2016**



## References

WERU. (2016) Superfast Broadband Business Exploitation Project: Economic impact report. Cardiff: Cardiff University.