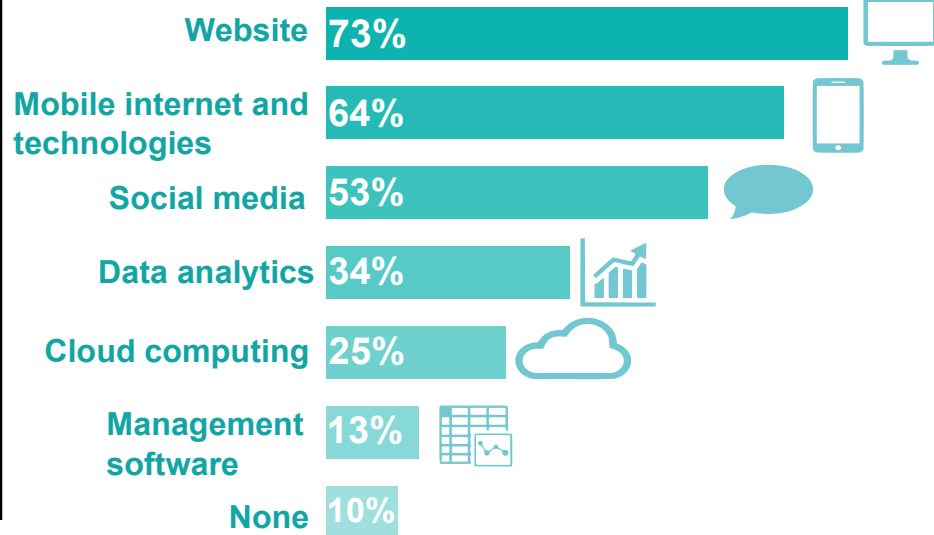


Digital Economy Business Survey 2014

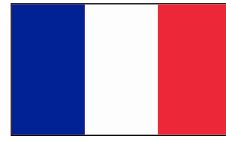
92% of businesses have broadband



Adoption of key technologies:



6 out of **10** state that using mobile internet and technologies enables staff to work remotely



One third of exporters sell at least 20% of their international sales via their website



4 out of **10** businesses are fully equipped with sufficient technology skills

The most common barriers to increasing use of digital technologies were



Funds
21%



Time
17%



Skills
15%

Digital Economy Business Survey 2014

Office of the Chief Economic Adviser
March 2015

<http://www.gov.scot/Topics/Economy/digital>

This report presents the key findings from the 2014 Digital Economy Business Survey.

The Scottish Government, in partnership with Scottish Enterprise, Highlands and Islands Enterprise and Skills Development Scotland, commissioned IFF Research to carry out a Digital Economy Business Survey in the summer of 2014.

The aim of the survey was to establish a baseline on both the current level of digitisation by Scottish businesses and to allow digital progress to be measured and tracked over time.

Introduction

The Scottish Government has an ambition for Scotland to be a world leading digital nation by 2020. To achieve this people in Scotland need to be confident and capable users of digital technologies, and businesses need to make effective use of such technologies to grow their business and to realise their full economic potential.

In order to establish the baseline of where businesses currently stand in their level of digitisation and to allow the digital progress to be measured and tracked over time, the Scottish Government, together with its partners Scottish Enterprise, Highlands and Islands Enterprise and Skills Development Scotland, commissioned IFF Research to carry out a Digital Economy Business Survey in the summer of 2014.

The purpose of the Digital Economy Business Survey was to:

- provide an understanding on the level of digitisation of Scotland's businesses;
- allow for benchmarking and progress to be measured over time; and
- provide an insight into the areas businesses may require extra support to improve their adoption and exploitation of digital technology.

This report presents the high-level results from the survey.

Key findings from the survey

- **Internet connection:** 92 per cent of businesses had access to a broadband connection (19 per cent had Next Generation Access¹ (NGA)).
- **Adoption of technologies:** The most widely adopted digital technologies were having a company website (73 per cent), making use of mobile technologies (64 per cent) and using social media (53 per cent).
- **Reasons for not using technologies:** Among the most commonly stated reason why businesses do not use various digital technologies was that the specific technology is not relevant to the business. Other common reasons were a lack of understanding or knowledge of how to use them, lack of customer demand, cost and the business being too small.
- **Benefits of using technologies:** Different types of digital technology bring different benefits to businesses. Benefits range from:
 - technologies generating exposure of the company and that it has increased responsiveness to customers (website and social media); to
 - allowing for greater flexibility and remote working (mobile internet and technologies and cloud computing) and

¹ Defined here as broadband products providing a download speed that is greater than 24 Mbit/s. This is consistent with the definition used in our [Digital Scotland Superfast Broadband](#) project.

- better advertising (data analytics) and collection of vital customer data (management software).
- **Digital public services:** 60 per cent of businesses had used a Scottish public authority website in the last 12 months. The most common activity to was to obtain or read information (49 per cent). Of those that had used digital public services, 82 per cent stated that it had saved time and made it easier to find the information needed.
- **Innovation:** Among businesses using digital technologies, 71 per cent stated that they have used the technologies to aid the development of new products and services – most commonly by researching competitor products online (55 per cent had done this).
- **Internationalisation:** Around one-fifth (18 per cent) of businesses sold goods or services or licensed their products outside the UK. A third (33 per cent) of the exporting businesses made 20 per cent or more of their export sales via their website.
- **Internationalisation:** 65 per cent of exporters agreed with that using digital technologies had increased the number of international markets they export to.
- **Skills:** 37 per cent of businesses stated that their employees were equipped with sufficient technology skills to meet the business' digital technology needs.
- **Overall importance of digital technology to current operations:** Overall, 75 per cent of businesses stated that digital technologies are essential or important for the current operations of the business.
- **Overall importance of digital technology to future growth:** Similarly, 75 per cent stated that digital technology was essential or important to the future growth or competitiveness of their business
- **Barriers to future use of technologies:** Businesses were asked what the main barriers are to their business increasing their use of digital technologies. While one quarter (25 per cent) of businesses stated that there were no barriers preventing them from increasing their use of digital technologies in the next year, the most commonly stated barriers were cost/lack of funds (21 per cent stated this), lack of time and/or resource to implement (17 per cent) and a lack of understanding/skills in the organisation (15 per cent).

Background and methodology

The Scottish Government, in partnership with Scottish Enterprise, Highlands and Islands Enterprise and Skills Development Scotland, commissioned IFF Research to carry out a Digital Economy Business Survey in June-July 2014.

The aim of the survey was to establish a baseline on the current level of digitisation by Scottish businesses and to allow:

- the tracking of Scotland's progress in the digital economy and in comparison to competitor nations;
- the ability to inform targeted policy initiatives to help accelerate both adoption and exploitation of economic potential; and
- the tracking of usage and exploitation linked to the investment in the roll-out of next generation broadband.

Detailed methodology

- In total, 4,002 businesses (excluding sole traders) in Scotland took part in the research via a telephone survey. 1,809 of these interviews were carried out with businesses in the Scottish Enterprise (SE) area, while 2,193 interviews were undertaken with businesses in the Highlands and Islands Enterprise (HIE) area.
- The results presented in this report are based on the 4,002 interviews. The survey data has been weighted to provide representative results with respect to region, size and sector.
- The survey definition of a "Scottish" enterprise included businesses wholly located in Scotland and those which were head-quartered in Scotland but had subsidiaries and sites outside Scotland². These businesses were required to answer the survey about their sites in Scotland.
- The sample for the survey was sourced from Dun and Bradstreet and supplemented with information from the Inter-Departmental Business Register to ensure sufficient coverage of the population.
- Quota targets were set to ensure the 4,000 interviews were spread across size, sectors and regions to allow for subgroup analysis by these variables, whilst being mindful that the further the quota targets take the distribution of achieved interviews from the natural business population distribution the larger the "design effect", reducing the effective sample size and thus the robustness of the overall sample.

² This meant that businesses that have their headquarters outside of Scotland but have subsidiaries and sites in Scotland were excluded from the sample.

- Given the range of business information the survey covered it was important to ensure the correct respondent who would be most suitable for the survey was identified. The issue being that the person who may be best placed to answer questions about the business strategy may not be the same person who is best placed to answer technical questions about, for example, broadband connection and speed.
- For enterprises with nine or fewer employees, the most appropriate person to speak to was the owner / proprietor. In larger businesses, the individual who was responsible for the decision making regarding the IT systems was interviewed.
- The overall response rate for the survey was 48 per cent (completed interviews as a proportion of completes and refusals).

Sample breakdown by region, sector and size

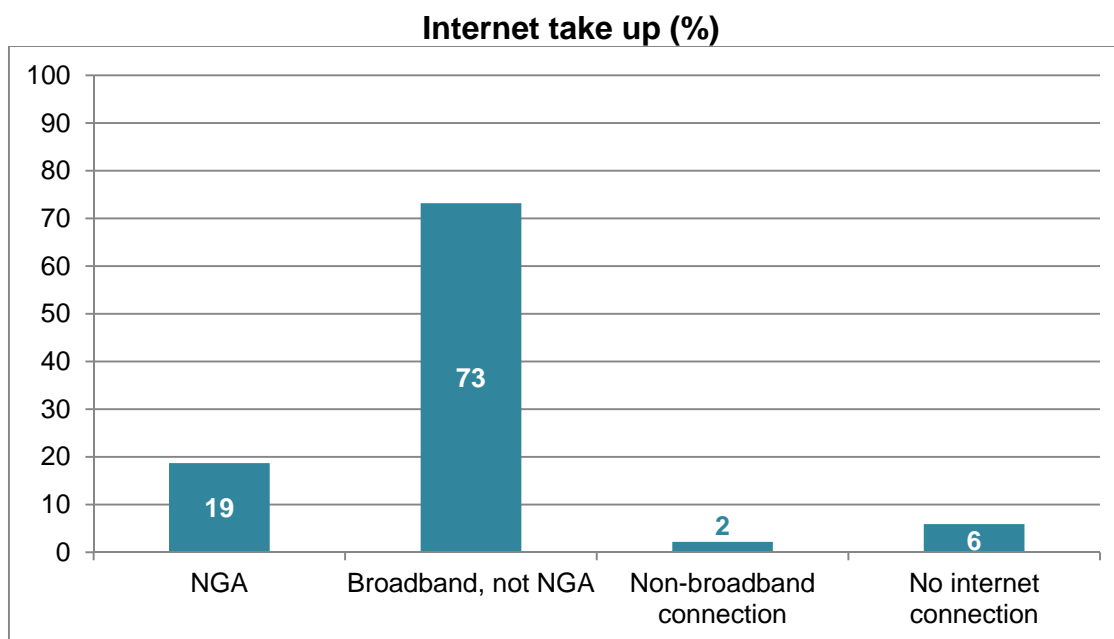
Region	Weighted proportion (%)	Unweighted number
Scottish Enterprise	88	1,809
Highlands and Islands Enterprise	12	2,193
<i>Total/Base</i>	<i>100</i>	<i>4,002</i>
Sector		
Agriculture	8	317
Manufacturing	6	285
Construction	12	341
Wholesale/Retail	17	703
Hotels/Restaurants	12	624
Transport/Communications	6	304
Business Activities	22	673
Health/Social Work	6	298
Other services	11	457
<i>Total/Base</i>	<i>100</i>	<i>4,002</i>
Size		
Micro (1-9 employees)	82	2,248
Small (10-49 employees)	15	1,333
Medium (50-249 employees)	2	306
Large (250+ employees)	1	115
<i>Total/Base</i>	<i>100</i>	<i>4,002</i>

The survey data has been weighted to provide representative results with respect to region, size band and sector. While this report focuses on high-level national results, more detailed results, including sub-group analysis, can be found in the accompanying web tables.

DIGITAL CONNECTIVITY

Modern digital infrastructure is one of the essential components of creating successful businesses, enhancing their productivity and driving innovation. [Scotland's Digital Future: Infrastructure Action Plan](#) sets out the steps the Scottish Government will take to deliver world-class future proofed digital infrastructure across all Scotland by 2020, closing the digital divide and ensuring that the whole of Scotland can participate in the digital world.

This section looks at the take up of standard and next generation broadband among businesses in Scotland, and the reasons why businesses without internet access are not connected.



Base: 4,002

Internet take up

- In total, 92 per cent of businesses had a broadband connection. Around one-fifth (19 per cent) had next generation access³ (NGA).
- Among businesses that had internet access, around one quarter (23 per cent) stated that they were fairly or very likely to improve their connection in the next 12 months. Two-thirds (67 per cent) were fairly or very unlikely to do so.

Reasons for not wanting to improve internet connection

- The most common reason for not wanting to improve the internet connection was that the current connection was sufficient (60 per cent).
- Under one-fifth (19 per cent) stated that 'lack of availability of improved connection' as a reason, and 16 per cent stated that they already have the best connection available.

Businesses with no internet connection

- Among those businesses that did not have internet access, almost two-fifths (38 per cent) stated that there was no internet connection available. Around one quarter (24 per cent) stated that they were fairly or very likely to get an internet connection in the next 12 months, while 73 per cent were either fairly or very unlikely to do so.
- Among those that were unlikely to get an internet connection, the most commonly cited reason was that there was no business need (72 per cent).

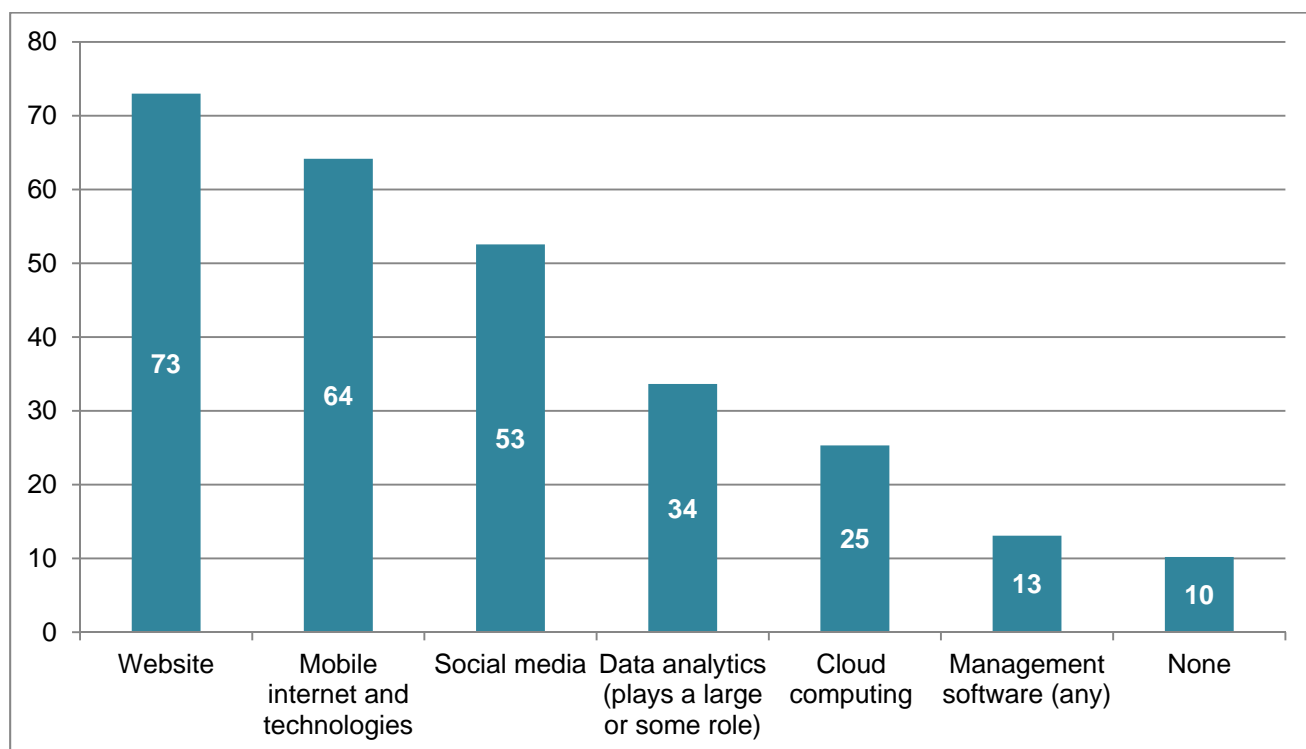
³ Within this report, NGA broadband is defined as a download speed that is greater than 24Mbit/s. Non-broadband includes mobile networks such as 3G and 4G and dial-up.

ADOPTION OF KEY TECHNOLOGIES

Digital technologies are widely recognised as enablers of productivity and drivers of innovation and international trade. They underpin business growth across every sector of the economy and can enhance productivity, allowing for time savings and resources to be freed up and used elsewhere.

This section outlines businesses' adoption of some of the most common digital technologies, including mobile internet, cloud computing, social networking and data analytics. It also details the benefits businesses experience from using digital technology, and cites the most common reasons why some businesses do not make use of digital technologies.

Adoption of key digital technologies (%)



Base: 4,002

Usage of key technologies

- The most widely adopted digital technologies were having a company website (73 per cent) and making use of mobile technologies⁴ (64 per cent).
- Data analytics was used by 34 per cent of businesses. Data analytics played a large role in the operation of nine per cent of businesses, and some role for a quarter (25 per cent) of businesses.
- One-tenth of businesses did not use of any of the listed technologies.

Benefits

- The most commonly cited benefit of having a website and using social media was that it generated exposure for the organisation (81 per cent and 59 per cent respectively stated this).
- Around one-fifth (18 per cent) of businesses using social media stated that they experienced no benefits at all.
- Of businesses using mobile technologies, 59 per cent stated employees being able to work remotely as a benefit. Similarly, around half (51 per cent) of those using cloud computing stated that they benefited from this technology as it allows data to be accessed from anywhere.
- More accurate and targeted marketing was the most cited benefit among data analytics users (25 per cent). 38 per cent of businesses using management

⁴ Includes mobile broadband connection via portable devices (e.g. tethering to mobile 3G or 4G networks); portable computers using mobile phone networks (e.g. laptops with inbuilt 3G or 4G) and other portable devices such as smartphones or tablets.

software stated that they benefited from this as the software collects vital data.

Top three most cited reasons for not using key digital technologies (%)

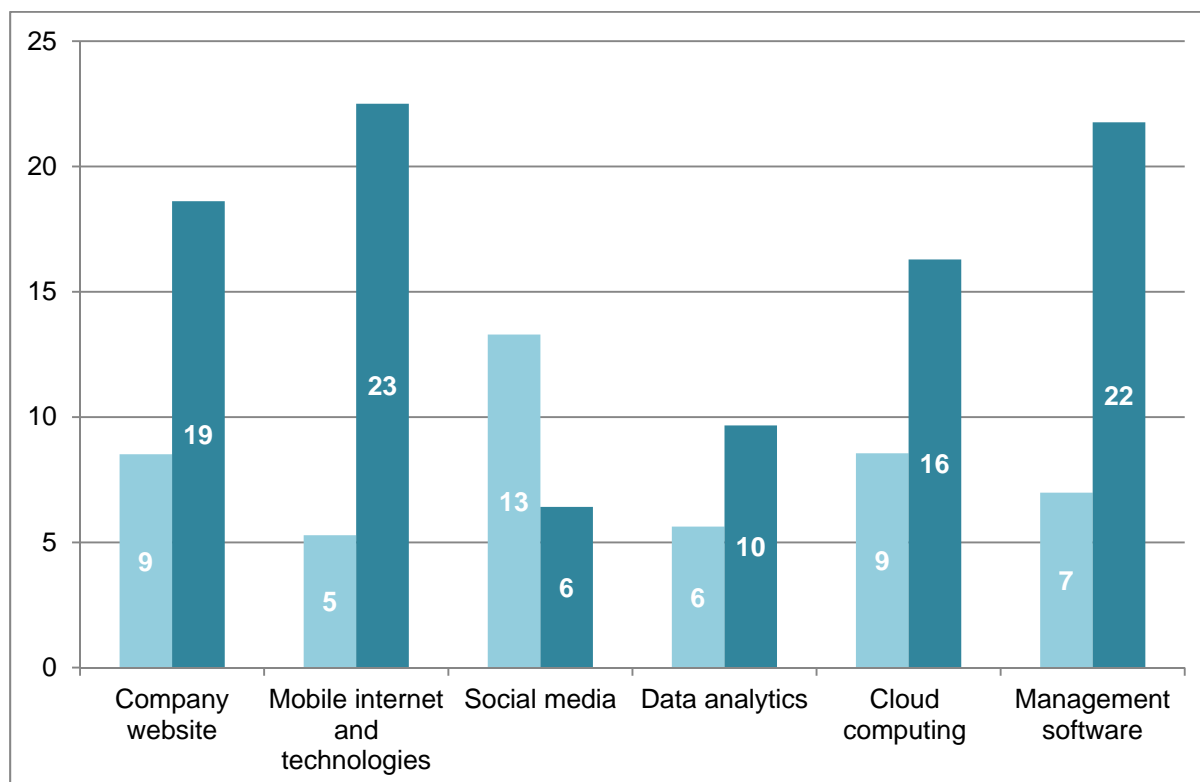
Website	
No need / desire to have one	18
Lack of customer demand for purchasing via the internet	18
Prefer current business model, e.g. face-to-face interaction	18
<i>Base</i>	917
Social media	
No need / customers don't use / not relevant to the business	57
Don't see any benefits to it	20
Lack of time and / or resource to implement	13
<i>Base</i>	1,553
Mobile internet and technologies	
Not relevant to the business	74
Cost / lack of funds	7
Mobile signal not sufficient	7
<i>Base</i>	1,444
Cloud computing	
Not relevant to the business	56
Don't understand cloud computing / wouldn't know how to	13
Security and / or privacy concerns	8
<i>Base</i>	2,762
Main reasons for not using data analytics	
Not relevant to the business	72
Don't understand data analytics / wouldn't know how to	13
The business is too small to warrant using data analytics	10
<i>Base</i>	2,200
Management software	
Not relevant to the business	69
Business is too small	24
Don't understand IT / wouldn't know how to	10
<i>Base</i>	3,230

Reasons for not using digital technologies

- The most commonly cited reason for not using a certain technology among non-users was that the technology in question was not relevant to the business.
- Other reasons include: lack of skills/understanding; that the business was too small and cost/lack of funds

How integral the use of various digital technologies is to the business (%)

1 = it makes little difference to the business if technology is not used (light blue/green), and 10 = it is a central part of how the business operates Importance of digital technology to current operations of business (darker blue/green)



Base: 4,002

Importance of digital technology to the operation of business

- Businesses using mobile internet and technologies and management software were most likely to rate these technologies as central to the way the business operates (i.e. giving it a score of ten).
- A greater proportion of businesses that used social media indicated that it would make little difference to the business if the technology was not used (i.e. by giving it a score of one) than those rating it as a central part of how the business operates.
- More generally, when asked about the overall importance of digital technology to the current operations of the business, 29 per cent of businesses responded that it was essential⁵. Just under half (47 per cent) stated that digital technology was either important or very important, while one quarter (25 per cent) stated that it was not important or not at all important.

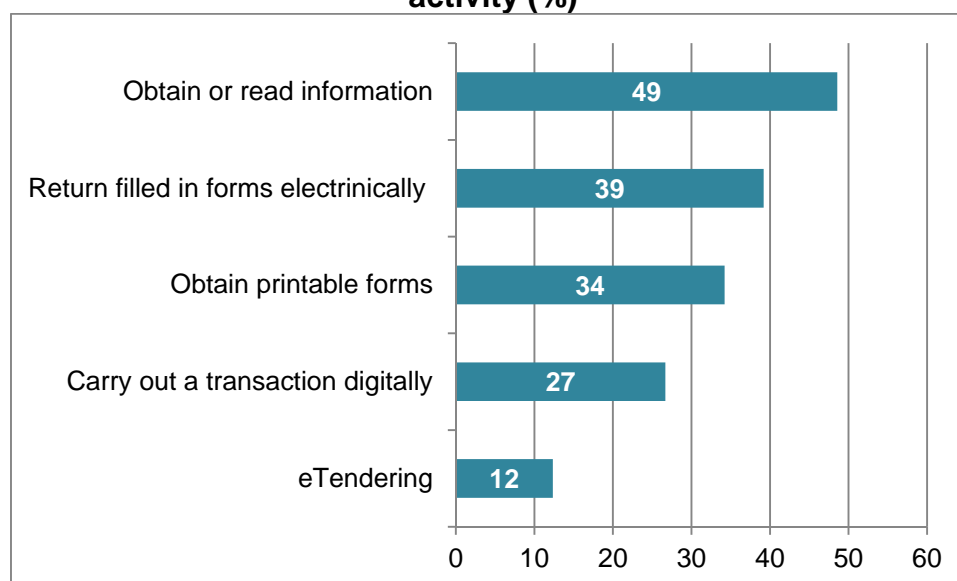
⁵ See web tables for further details.

DIGITAL PUBLIC SERVICES

The Scottish Government is working with the wider public sector to achieve public services that are high quality, continually improving, efficient and responsive to local needs. In the Digital Public Services Strategy, [Scotland's Digital Future: Delivery of Public Services](#), we set out our ambition to use digital technologies to redesign services to better meet users' needs. The public sector will ensure that businesses can deal digitally with the public sector in an effective and efficient manner, allowing time and money savings to be made.

This section looks at businesses use of Scottish public sector websites and the benefits that arise from using public services online.

Use of Scottish public authority⁶ websites in the last 12 months, by type of activity (%)



Base: 4,002

Business use of digital public services

- 60 per cent of businesses had used Scottish public authority websites in the last 12 months for any activity.
- Around half (49 per cent) of businesses had used a public authority website to obtain or read information, while 39 per cent had returned completed forms electronically.
- Around a third (34 per cent) of businesses had obtained printable forms online.

Benefits and disadvantages of using public services online⁷

- A vast majority of businesses that had engaged with public authority websites stated that they experienced benefits from doing so (91 per cent).
- Specifically, 82 per cent stated that using public authority websites saves time and that makes it easier to find the information needed, while 58 per cent of businesses stated that interacting with public services over the internet saves the business money.
- Eight per cent stated that they experienced no benefits at all.
- Overall, one-third (33 per cent) of businesses that had used online public services stated that they experienced disadvantages from it. Disadvantages included that it was harder to find the information needed (15 per cent), that it takes more time and that it is too impersonal (both six per cent).

⁶ I.e. Scottish Government, Scottish local authority or Scottish public service website.

⁷ See web tables for full lists of the cited benefits and disadvantages.

INTERNATIONALISATION

The internet and digital technologies open up new opportunities to global markets for consumers as well as for businesses. Effective use of digital technologies, including tailoring company websites to international markets and using digital marketing and social media, can enable businesses to easily reach new markets and increase their exports.

The following section looks at the extent to which exporters in Scotland use the internet to enhance their sales outside the UK.

Proportion of sales via website made to customers outside the UK (%)

Proportion of sales	Sales via website to customers outside of the UK
All - 100%	5
80-99%	6
60-79%	4
40-59%	7
20-39%	11
Less than 20%	55
None	7
Don't know	5
Total	100
<i>Base</i>	359

Scottish businesses and internationalisation

- Just under one-fifth (18 per cent) of businesses sold goods or services or licensed their products outside the UK.
- Only two per cent of businesses that currently did not export stated that they have plans to start exporting in the next 12 months.
- Among exporters, around two-fifths (41 per cent) stated that 20 per cent or more of their sales come from international markets.
- A third (33 per cent) of exporters made 20 per cent or more of their export sales via their website.

International sales via website compared with 2-3 years ago

- Comparing current exports made via the business website with such sales 2-3 years ago, 17 per cent of exporters had increased the proportion of exports via their website by more than 20 per cent. 12 per cent had increased such sales by up to 20 per cent.
- 14 per cent of exporters stated that the proportion of exports made via their website had decreased slightly or significantly. Around half (48 per cent) stated that they have stayed about the same.

Digital technology and internationalisation

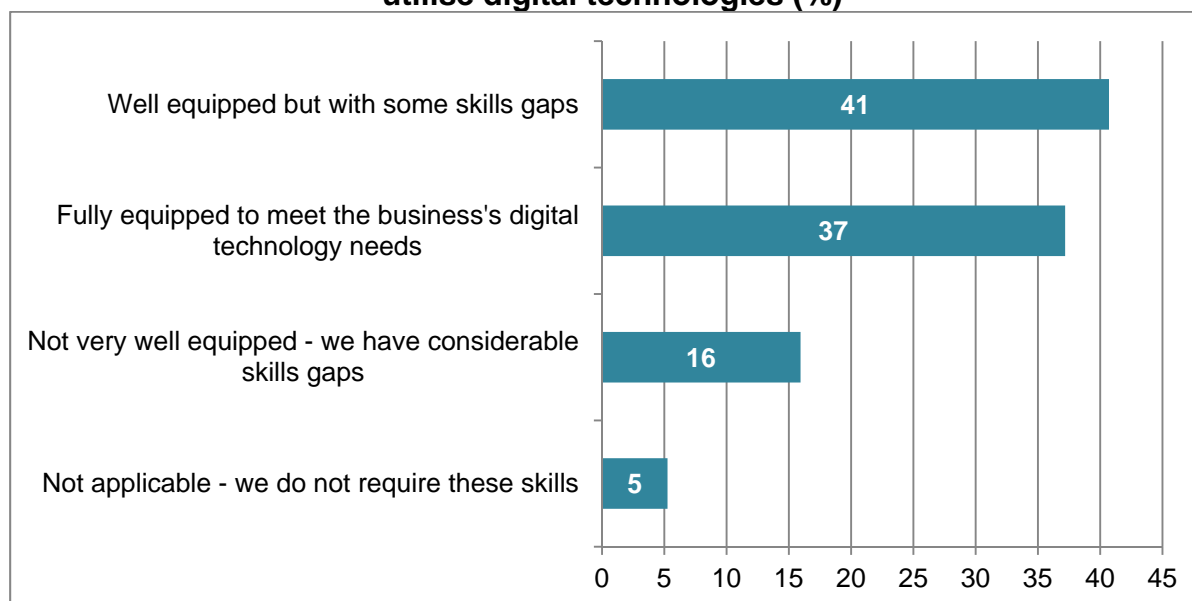
- Overall, around a third (32 per cent) of exporting businesses that made sales to customers outside the UK via their website had tailored the website for different international markets.
- Two-thirds (66 per cent) agreed with the statement that their use of digital technologies had increased the number of international markets they export to.

SKILLS

For Scottish businesses to be able to fully exploit the opportunities offered by digital technologies to drive growth, improve productivity and stimulate innovation it is essential that the workforce have the skills and confidence to do so.

The next section looks at the extent to which the digital skills required by businesses are readily available in the workforce.

How equipped would you say your staff are as a whole, in terms of skills to utilise digital technologies (%)



Base: 4,002

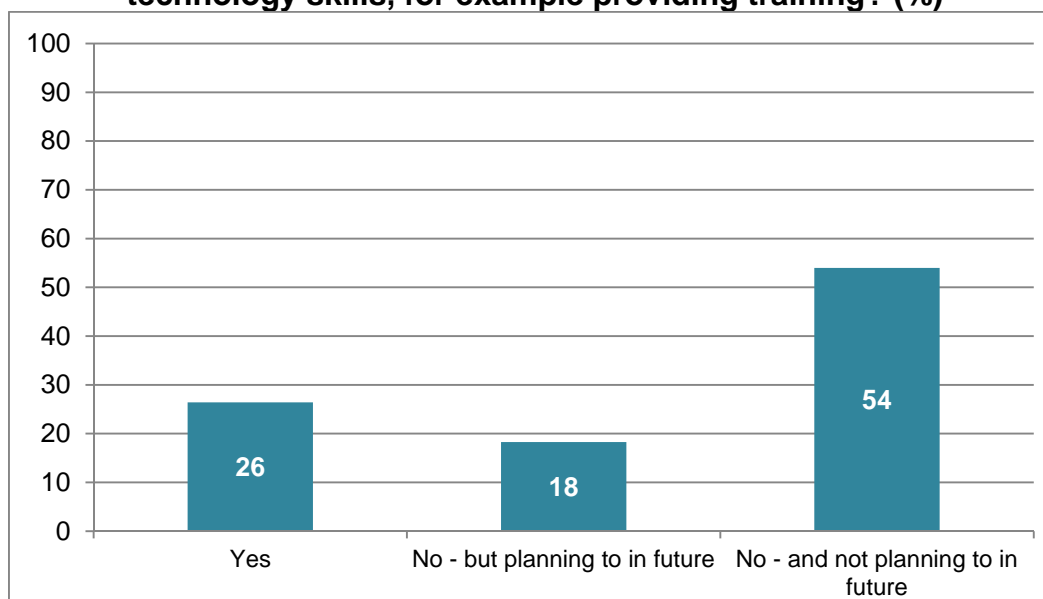
Digital skills of workforce

- 37 per cent of all businesses stated that their staff were fully equipped in terms of skills to meet the business' digital technology needs.
- Over two-fifths (41 per cent) stated that they were well equipped but with some skills gaps, and 16 per cent stated that they had considerable skills gaps.

Type and impact of skills gaps

- The most commonly cited skills that staff were lacking were: software skills (58 per cent), web development skills (55 per cent) and digital marketing skills (51 per cent).
- Six per cent stated that the skills gaps have a major impact on the performance of the organisation, while 38 per cent stated that it has a minor impact.
- When asked what areas have been affected by their employees' digital skills gaps, the most cited answer was that it prevented the business from fully exploiting the latest methods and technologies (21 per cent). 18 per cent stated that it had prevented adoption of the latest methods and technologies, and 15 per cent respectively stated that it impacted on the business' ability to sell products/services over the internet and ability to adopt or develop digital advertising.

Is your business doing anything to develop your current employees' digital technology skills, for example providing training? (%)



Base: 4,002

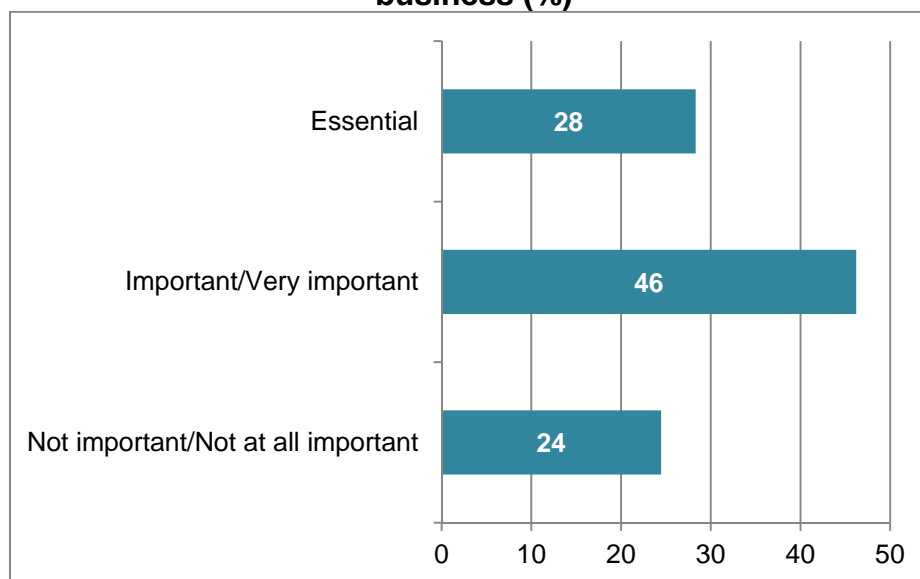
Measures taken to develop employees' digital skills

- Just over one quarter (26 per cent) of businesses stated that they are doing something to develop their current employees' digital technology skills, for example by providing training. 18 per cent stated that they are planning to do this in the future.
- Over half (54 per cent) stated that they were not currently taking action to develop their employees' digital skills and had no plans to do so in the future.
- Nine per cent of businesses had successfully recruited an ICT specialist in the last 12 months. One per cent had tried but had not been able to do so.

FUTURE AMBITIONS

This final section presents businesses' future ambitions in their use of digital technologies, including the importance they attach to the use of digital technologies to the future growth of their business; their wish to further develop the usage of technology and the barriers that business face in expanding their usage of technologies.

Importance of digital technology to the future growth or competitiveness of the business (%)



Base: 4,002

Importance of digital technology in the future

- The majority of businesses stated that digital technology was important to the future growth or competitiveness of their business; 28 per cent considered digital technology to be essential while 46 per cent stated that it was important or very important.
- Less than one quarter (24 per cent) did not think digital technology was important.

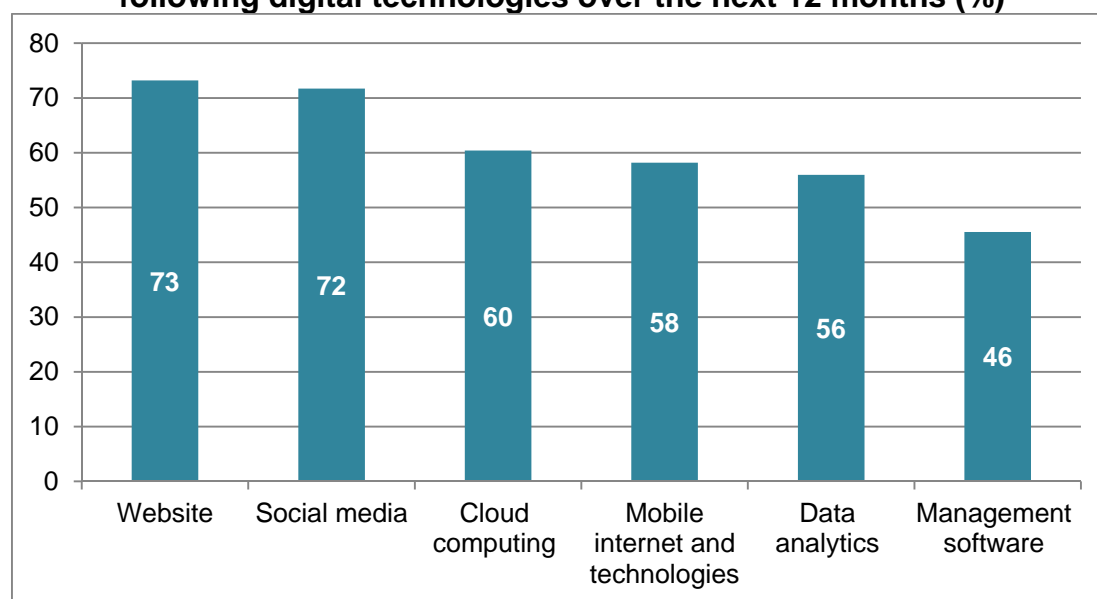
Main barriers to the business increasing its use of digital technologies over the next 12 months (%)

Cost / lack of funds	21
Lack of time and / or resource to implement	17
Lack of understanding / skills in the organisation	15
No need / no strong business case	15
Appropriate technology is unavailable	9
Poor internet connection	6
Other	3
No barriers	25
<i>Base</i>	<i>4,002</i>

Barriers to increasing use of digital technologies

- One quarter (25 per cent) of businesses stated that there were no barriers preventing them from increasing their use of digital technologies in the next year.
- The most cited barriers to increasing businesses' use of digital technologies over the next 12 months were cost/lack of funds (21 per cent stated this) and lack of time and/or resource to implement (17 per cent).

Proportion of businesses stating that they hope to develop or use more of the following digital technologies over the next 12 months (%)



Base minimum, Management software: 635

Future use of digital technology

- Overall, there is a desire among a majority of businesses that already use digital technologies to further develop their usage (77 per cent).
- Over 70 per cent of businesses with a website or using social media respectively were hoping to develop or use more of the technology in question.
- 60 per cent were hoping to develop their usage of cloud computing, and 58 per cent wanted to expand their use of mobile internet and technologies.
- 46 per cent of businesses using management software were hoping to develop or increase their use of this type of technology.

Expectations of future sales over the internet

- 29 per cent of businesses expected internet sales to make up 20 per cent or more of their total sales over the next 2-3 years. Two per cent expected to sell all their products and/or services via the internet over the next 2-3 years.
- Two-fifths (40 per cent) stated that they expected to make no sales via the internet over the next 2-3 years.

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