Commentary on Scotland's Digital Performance



Commentary on Scotland's Digital Performance

Summary

Digital Scotland Performs will track and measure Scotland's progress towards becoming a world-leading digital nation.

Work is underway to determine the sources that will be utilised to collect the data for this framework. This is likely to be a mix of existing data sources, such as the Scottish Household Survey, and new data collections, where no appropriate existing source is available.

In the meantime, the Scottish Government has produced a commentary on Scotland's digital performance under the four themes outlined in Digital Scotland Performs based on currently available data. Whilst this summary may focus on different indicators from those outlined in Digital Scotland Performs, it aims to provide a comprehensive overview of Scotland's digital progress to date.

Where possible, comparisons have been made with the UK and European nations and where comparisons over time are made, this will generally cover the period over which the data has been collected.

PARTICIPATION

- The proportion of households with internet access in Scotland has increased from 40 per cent in 2003 Q1 to 76 per cent in 2012 Q4.
- In Scotland, the proportion of adults using the internet for personal use has increased from 62.7 per cent in 2007 to 77 per cent in 2012.

PUBLIC SERVICES

- Among internet users in Scotland, 62 per cent had ever used a Local Authority website for any purpose and 64 per cent had ever used a Government website for any purpose.
- The most commonly stated reason for using a public authority website was to find information.

ECONOMY

- 87 per cent of SMEs in Scotland had broadband in 2012 and 52 per cent had a website.
- 60 per cent among Scottish SMEs used internet to promote goods and services and 34 per cent used internet for selling goods and services.

CONNECTIVITY

• In 2012 NGA broadband was available to 47.6 per cent of all households in Scotland. This compared with 67.9 per cent of all households in the UK.

Digital Participation

"Our people and businesses are confident and capable users of digital technologies"

Scotland's Digital Participation progress has been measured using the following sources:

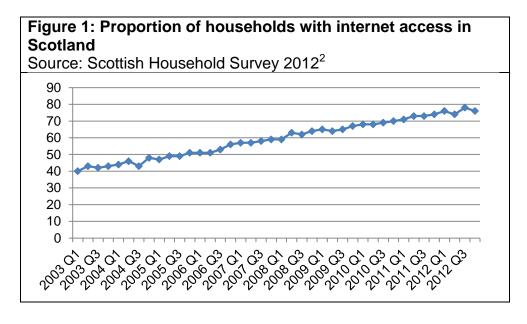
- Scottish Household Survey (SHS)
- Ofcom Communications Market Reports
- ONS Opinions and Lifestyle Survey
- eSkills Technology Insights Report 2012

The Scottish Household Survey is the Scottish Government's preferred source for measuring Scotland's digital participation due to its large sample size. However, to enable comparisons with the UK and European countries, other data sources have been utilised. The Scottish Government is currently considering the inclusion of additional questions in the Scottish Household Survey to allow wider comparisons to be made.

It should be noted that the Scottish sample sizes for the Ofcom, ONS and eSkills survey are considerably smaller than the sample size for the Scottish Household Survey¹.

<u>Digital participation by households and individuals</u>

The proportion of households with internet access in Scotland has increased by 36 percentage points since 2003 when data collection began, from 40 per cent in the first quarter of 2003 to 76 per cent in 2012 Q4 (Figure 1).



 $^{^{1}}$ SHS (n=ranging from 14,880 in 2003 to 3,420 in 2012), Ofcom (n=501), ONS (n=501), eSkills (n=244)

http://www.scotland.gov.uk/Publications/2013/08/6973

Figure 2 shows the proportion of adults using the internet for personal use (as measured in the Scotland Performs National Indicator: 'Widen the use of Internet'). The proportion of adults using the internet for personal use has increased by 14.3 percentage points between 2007 and 2012, from 62.7 per cent in 2007 to 77 per cent in 2012.

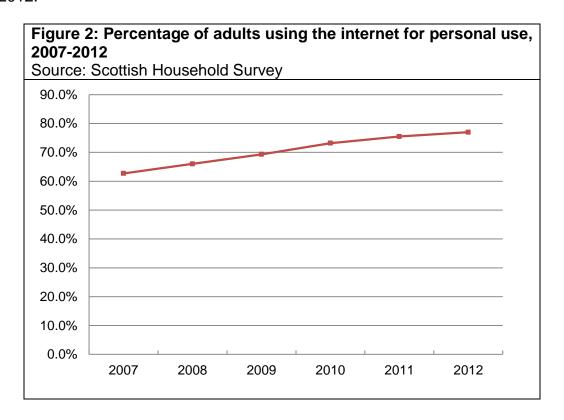


Figure 3 compares internet use by key interest groups with that of all adults in Scotland.

- Two thirds (67 per cent) of adults in 15 per cent of the most deprived areas in 2012 used internet for personal purposes.
- A smaller proportion of people in older age groups used the internet (46.6 among those aged 60 or older³).
- Among people with a disability and/or a long-standing illness⁴ 54 per cent stated to use the internet in 2012.
- 49 per cent of respondents living in social rented housing⁵ used the internet.
- 55.9 per cent of respondents earning lower incomes used the internet. This compares with 98 per cent of those in the highest income group⁶ (earning £40,001 or more) using the internet.

³ Those aged 60 years or older made up 28 per cent of respondents.

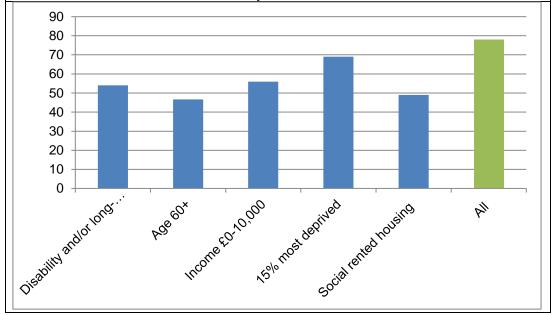
⁴ 24.6 per cent of respondents had a disability and/or longstanding illness

⁵ In 2012 social housing accounted for 23 per cent of all dwellings.

^{6 11.1} per cent of respondents earned incomes between £0-£10,000. 18.9 per cent of respondents earned £40,001 or more.

Figure 3: Use of the internet in Scotland by disability and/or longstanding illness, older age group, 15% most deprived, social rented housing and low income (per cent)⁷

Source: Scottish Household Survey 20128



While the data from the Scottish Household Survey provides the most accurate information about Internet use in Scotland due to its large sample size, it does not provide comparisons with the UK as a whole. Ofcom's Communications Market Report provides annual survey data that is comparable across the UK⁹.

- As shown in Figure 4, Ofcom data indicates that total broadband uptake for Scottish households was 70 per cent of households in 2013 Q1 compared to 75 per cent of households in the UK as a whole and that three quarters (76 per cent) of households in Scotland had internet access in 2013 Q1 compared with 80 per cent of UK households.
- Figure 5 shows that according to Ofcom, whilst both total broadband uptake and internet access in Scotland have grown annually since 2008 Q1, growth has been particularly strong since 2011.

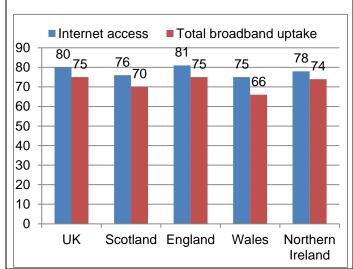
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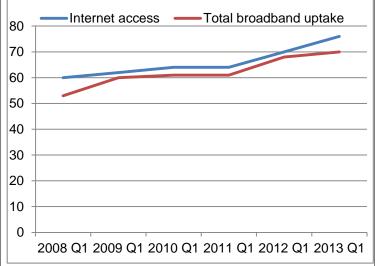
⁷ Scottish Household Survey, 2012

⁹ Though the sample size of Ofcom should be noted and that both measures are for households.

Figure 4: Internet access and total broadband uptake. UK nations, 2013 Q1 Source: Ofcom Communications Market Report 2013¹⁰

Figure 5: Internet access and total broadband uptake, Scotland, 2008 Q1 to 2013 Q1 Source: Ofcom Communications Market Report 2013¹¹





Data on proportion of households with access to the internet at home in Scotland and Great Britain (GB) from the ONS Opinions and Lifestyle Survey allows for comparisons with the EU¹² (Figure 6). However, it should be noted that whilst data for Scotland and GB is available for 2013, EU data is currently only available for 2012. These differences in time period should be borne in mind when considering results presented in Figure 6.

Figure 6 shows that:

- A greater proportion of households had internet access in Scotland and GB compared with the EU average; 77.6 per cent in Scotland, 83 per cent in the UK and 76.1 per cent in the EU.
- GB figures lag behind European countries such as the Netherlands (93.6 per cent), Luxembourg (93 per cent), Denmark (92 per cent), Sweden (91.7 per cent), Finland (86.8 per cent) and Germany (85.5 per cent).

¹⁰ http://stakeholders.ofcom.org.uk/binaries/research/cmr/cmr13/2013_UK_CMR.pdf

http://stakeholders.ofcom.org.uk/binaries/research/cmr/cmr13/2013 UK CMR.pdf

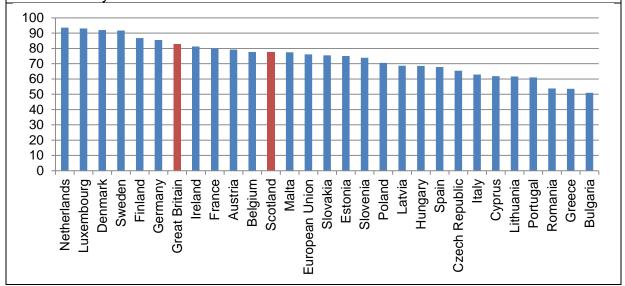
The Scottish Government boosted the ONS Opinions and Lifestyle Survey to allow robust Scottish comparisons to be made.

Figure 6: Proportion of households with access to the Internet at home in Scotland (2013), Great Britain (2013) and the EU (2012)

Sources: ONS Opinions and Lifestyle Survey 2013, European Commission Digital Agenda Scoreboard¹³

Note: Scotland and GB data is from 2013 and the EU data is from 2012.

ONS and the EC Digital Agenda Scoreboard use different definitions for households, which is likely to influence the results¹⁴.



Digital skills

The three most commonly stated reasons for why people do not use the internet for personal use in Scotland in 2012¹⁵ were: 'I don't like using the internet or computers' (32 per cent), 'I don't need to use the internet or computers' (27 per cent) and 'I don't know how to use a computer' (25 per cent). Whilst 12 per cent of respondents stated that they cannot afford a computer, and 2 per cent stated that an internet connection would be too expensive.

Data from the ONS Opinions and Lifestyle survey allows for Scotland¹⁶ and UK comparisons of the proportion of users who have undertaken a range of online activities.

- The majority of respondents had used a search engine to find information (92.1 per cent in Scotland and 92.7 per cent in the UK) and had sent e-mails with attached files (77.2 per cent in Scotland and 83.4 per cent in the UK).
- 40.1 per cent and 40.3 per cent had made telephone calls online in Scotland and the UK respectively, and 10.5 per cent of Scottish respondents and 13.9 of UK respondents had created a webpage.
- 4.9 per cent and 4.3 per cent in Scotland and the UK respectively had undertaken none of the listed activities.

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http://digital-agenda-data.eu/charts/analyse-one-indicator-and-compare-countries#chart={"indicator-group":"internet-usage","indicator":"h_iacc","breakdown-group":"any","breakdown":"HH_total","unit-measure":"pc_hh","ref-area":["BE","BG","CZ","DK","DE","EE","IE","EL","ES","FR","IT","CY","LV","LT","LU","HU","MT","NL","AT","PL","PT","RO","SI","S K","FI","SE","UK","EU27"]}

ONS definition: all households

EC Digital Agenda Scoreboard definition: households with at least one member aged 16-74

¹⁵ Scottish Household Survey, 2012

¹⁶ Scottish sample size n=386

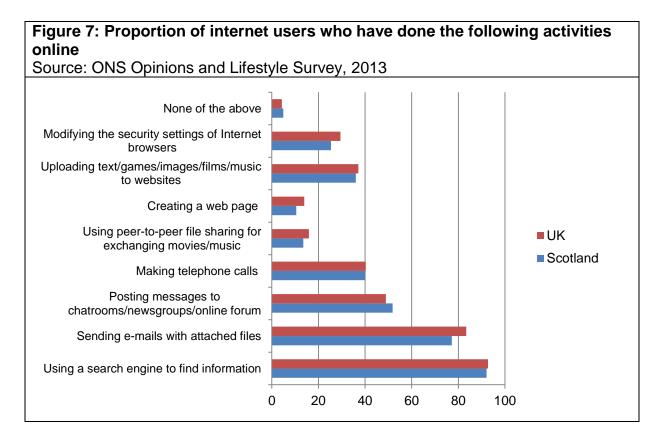
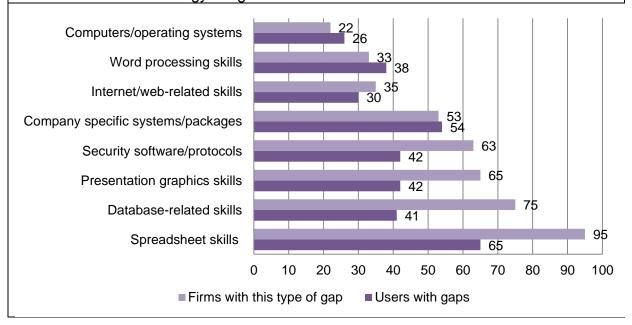


Figure 8 below identifies the incidence of computer users with gaps in their IT user skills in the UK, by users with gaps and firms with gaps.

- The most commonly stated area where gaps exist was spread sheet skills, where 65 per cent of users and 95 per cent of firms with IT user skills gaps state to experience a gap in this area.
- Other common areas of skill gaps where database-related skills (41 per cent of users and 75 per cent of firms), presentation graphics skills (41 per cent of users and 65 per cent of firms), security software/protocols (42 per cent of users and 63 per cent of firms) and company specific systems/packages (54 per cent of users and 53 per cent of firms).

Figure 8: Incidence of computer users with gaps in their IT user skills in the UK (by nature of skills gaps)

Source: eSkills Technology Insights 2012¹⁷



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¹⁷ https://www.e-skills.com/Documents/Research/Insights-2012/TechnologyInsights_2012_UK.pdf

Digital Public Services

"Our public sector makes best use of digital technologies to deliver high quality, efficient and responsive services, enabling access to information and services whenever and wherever citizens want them."

Scotland's Digital Public Services progress has been measured using the following sources:

- Scottish Household Survey (SHS)
- ONS Opinions and Lifestyle Survey
- Ofcom Communications Market Report

The measurement and benefits framework for Digital Public Services has already been developed. The Measurement and Benefits Framework contains 16 measures which provide comprehensive coverage of the main benefits areas arising from the activity set out in the "Scotland's Digital Future – Delivery of Public Services Strategy".

For the purposes of both Digital Scotland Performs and the Digital Public Services Measurement and Benefits Framework, work is underway to determine the Scottish Government's preferred sources for tracking progress. The Scottish Household Survey, the ONS Opinions and Lifestyle surveys and Ofcom's Communication Market Report are currently the best available sources.

It should be noted that the Scottish sample size for the ONS survey is considerably smaller than the sample size for the Scottish Household Survey¹⁸.

Use of Digital Public Services

Among internet users in Scotland, 62 per cent had ever used a Local Authority website for any purpose and 64 per cent had ever used a Government website for any purpose (Figure 9). The most commonly stated reason for using a public authority website was to find information.

Figure 9: Use (ever) of public services on the Internet in Scotland 2012 (proportion of Internet users)

Source: Scottish Household Survey, 2012¹⁹

Local authority website	%	Government website	%
Finding information	52	52 Apply for road tax	
Download a form	13	Apply for or renew my TV licence	20
Access services like report a fault, renew library books	11	Apply for or renew passport	16
Make payment like council tax or parking fine	10	Look for information about health services	
Ask a question	8	Register to vote	11

¹⁸ SHS (n = 2,270), ONS (n = 501)

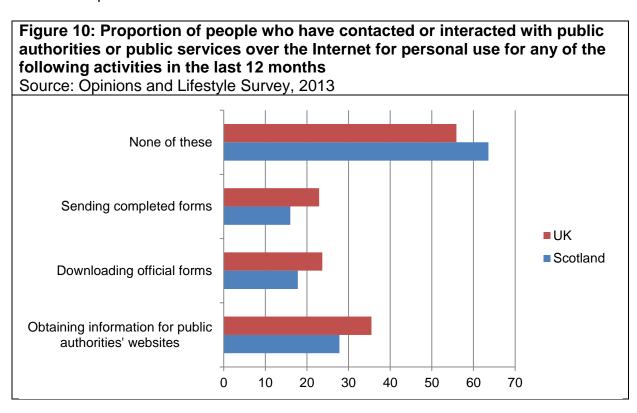
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http://www.scotland.gov.uk/Publications/2013/08/6973

Make a complaint	5	Complete income tax assessment	10
Participate in a discussion forum	1	Look for information about health or healthy living	9
Some other purpose	9	Apply for benefits	6
Any purpose	62	Other	9
None of these	38	Any purpose	
		None of these	36

The following results from the ONS Opinions and Lifestyle Survey allow for Scotland and UK comparisons. The latest statistics available on EU level are from 2010, and for this reason no comparison with the EU has been included at present. Overall, the results from the survey suggests that Scotland lags behind the UK as a whole.

- 27.8 per cent of Scottish respondents had contacted or interacted with public authorities or public services over the Internet to obtain information. This compares with 35.5 per cent of UK respondents.
- 17.8 per cent in Scotland and 23.7 per cent in the UK had downloaded official forms, and
- 16 per cent and 22.9 per cent in Scotland and the UK respectively had sent completed forms over the internet.



Similarly, there are differences between the activities undertaken by adults in Scotland and the UK as a whole (Figure 11).

- The most common activity among users of public authorities or public services websites was requesting personal documents/certificates (29.1 per cent in the UK and 24.7 per cent in Scotland).
- 18 per cent of UK respondents stated to have submitted their income tax declaration online, compared with 13.6 per cent in Scotland.

- The least common activity among users of digital public services in Scotland was claiming social security benefits (5.9 per cent compared with 9.2 per cent in the UK).
- The least common activity in the UK was enrolment in higher education/university (6.8 per cent in the UK compared to 8.3 per cent in Scotland).

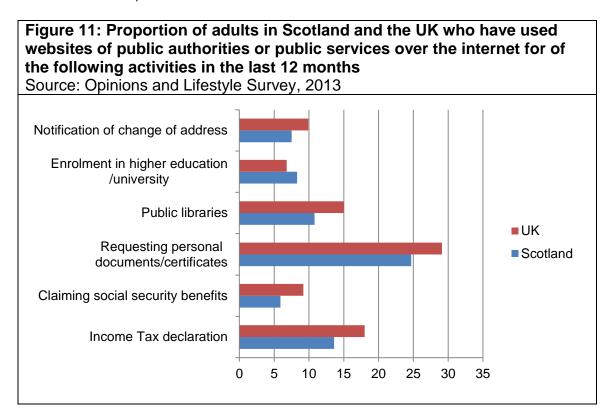
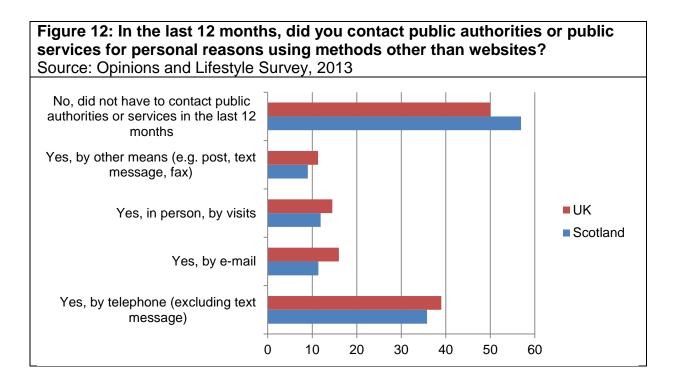


Figure 12 shows the proportion of people who contacted public authorities or public services using methods other than websites.

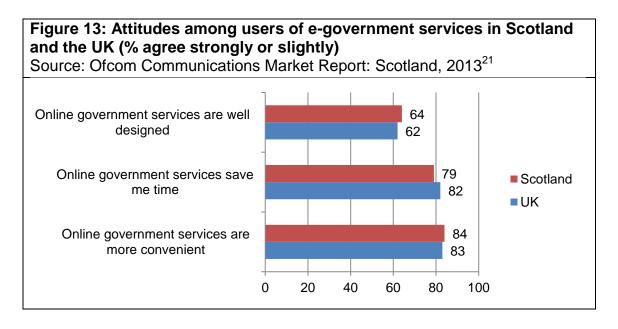
- 39 per cent of people in the UK and 35.8 per cent in Scotland contacted public authorities or services by telephone.
- 16 per cent in the UK and 11.4 per cent contacted public authorities or services by e-mail, and
- 14.5 per cent of UK respondents and 11.9 per cent of Scottish respondents contacted public authorities or services in person.



Attitudes to Digital Public Services

The most recent Ofcom Communications Market Report²⁰ comparing attitudes among users of e-government services in Scotland and the UK (Figure 13):

- 82 per cent of users of government online services in the UK and 79 per cent of users in Scotland found that online government services save them time.
- 62 per cent in the UK and 64 per cent in Scotland found online government services to be well designed, and
- 83 and 84 per cent in the UK and Scotland respectively found such services more convenient.



http://stakeholders.ofcom.org.uk/market-data-research/market-data/communications-market-reports/cmr13/ http://stakeholders.ofcom.org.uk/binaries/research/cmr/cmr13/2013 CMR_Scotland.pdf

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Digital Economy

"All Scottish businesses make effective use of digital technologies to grow their businesses and realise their full economic potential"

Scotland's Digital Economy progress has been measured using the following sources:

- **Small Business Survey**
- European Commission Digital Agenda Scoreboard

The Small Business Survey is The Scottish Government's preferred source at the moment to measure the progress of the digital economy and allows for UK comparisons – though it should be noted that this only provides information on small and medium sized enterprises. As there is currently limited data to measure Scotland's Digital Economy progress at a Scotland level, the Scottish Government is currently considering the scope of a business survey to gather this information.

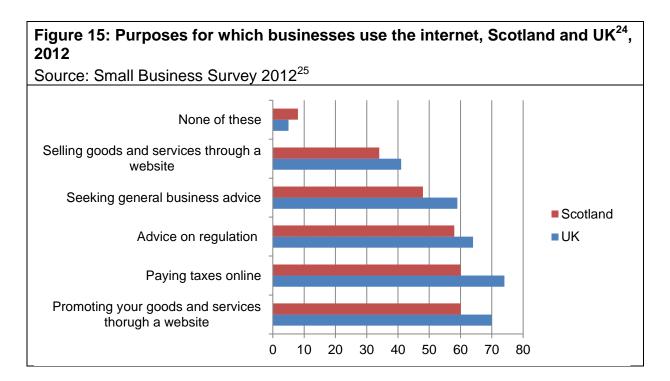
In 2012, 87 per cent of SMEs reported that they had broadband (Figure 14). Almost all small and medium sized employers had broadband: 99 per cent and 98 per cent respectively. The size band with the lowest take-up of broadband was the selfemployed, with 85 per cent broadband take-up.

The Small Business Survey all found that 52 per cent of all SMEs in 2012 reported that they had a website with the proportion of enterprises with a website increasing with sizeband.

Figure 14: Proportion of SMEs in Scotland with website/broadband ²² Source: Small Business Survey 2012 ²³					
	Website	Broadband			
All	52	87			
Self-employed	48	85			
Micro employers	60	93			
Small employers	86	99			
Medium sized employers	94	98			

60 per cent among Scottish SMEs used internet to promote goods and services and 34 per cent used internet for selling goods and services (Figure 15). Comparing with the UK, 70 per cent of SMEs used the internet to promote their goods and services through a website and 41 per cent used the internet to sell goods and services.

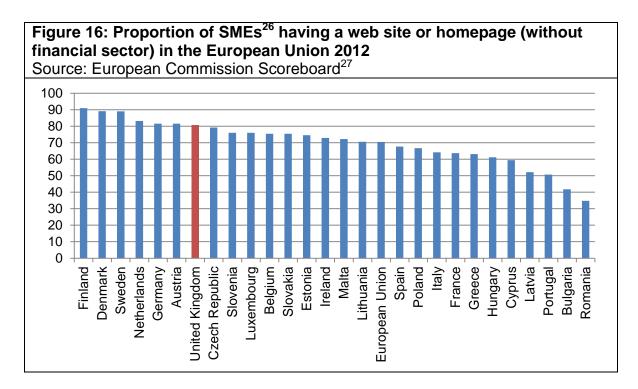
Small Business Survey Scotland, 2012
 http://www.scotland.gov.uk/Topics/Economy/ASBS/Report2012



Although there are limited data allowing for comparison between Scotland and other countries, Figure 16 shows the UK's relative performance in 2012 compared with EU nations on two measures – the proportion of SMEs with a website and the proportion of SMEs selling online.

In 2012 the UK ranked 7th in comparison with EU-27 with 80.9 per cent of enterprises (SMEs with 10-249 persons employed) having a website or a homepage. This is above the EU-27 average of 70.5 per cent and lower than that of the leading nation (Finland at 90.9 per cent).

Sample size: Scotland (n=498), UK (n=2269)
 http://www.scotland.gov.uk/Topics/Economy/ASBS/Report2012



Bearing in mind that the different data sources available for SMEs with a website or a homepage in Scotland and the European Union prevent strict comparisons to be made, the chart below can still give an indication of where Scottish SMEs are in relation to similar enterprises in other European nations. The small sample size²⁸ of Scottish SMEs should also be borne in mind.

- Figure 17 below shows that Scotland ranked 4th among the European nations with 88.5 per cent of SMEs having a website in 2012.
- Scotland's figure is not far behind the three leading nations Finland (90.9 per cent) and Denmark and Sweden (89.1 per cent).

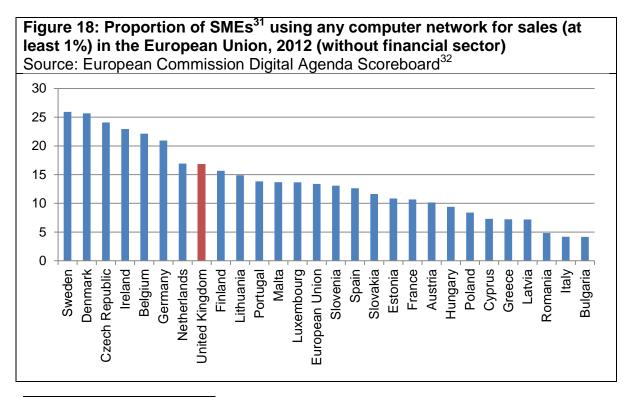
²⁶ 10-249 persons employed

²⁷http://digital-agenda-data.eu/charts/analyse-one-indicator-and-compare-countries#chart={"indicatorgroup":"ebusiness","indicator":"E_WEB","breakdown-group":"any","breakdown":"ent_sm_xfin","unit-measure":"pc_ent","refarea":["BE","BG","CZ","DK","DE","EE","IE","ES","FR","IT","CY","LV","LT","LU","HU","MT","NL","AT","PL","PT","RO","SI","SK","FI","SE","UK","EU27"]}

28 SMEs with 10-249 persons employed in Scotland: n=255

Figure 17: Proportion of SMEs²⁹ having a web site or homepage (without financial sector) in the European Union 2012 including Scotland Source: Small Business Survey 2012³⁰ for Scottish data and European Commission Scoreboard for EU data 100 90 80 70 60 50 40 30 20 10 Ireland Malta Poland Cyprus Latvia Luxembourg Netherlands Austria **Szech Republic** Slovenia Belgium Slovakia Estonia Lithuania **European Union** France Greece Jnited Kingdom **Jenmark** Scotland Germany Hungary

The UK ranked 8th among countries in EU-27 with 16.8 per cent of UK SMEs selling online (Figure 18). This is lower than the leading nation of Sweden (25.9 per cent) and slightly above the EU average (13.4 per cent).



²⁹ 10-249 persons employed

³⁰ http://www.scotland.gov.uk/Topics/Economy/ASBS/Report2012

³¹ 10-249 persons employed

³² http://digital-agenda-data.eu/charts/analyse-one-indicator-and-compare-countries#chart={"indicator-group":"ecommerce","indicator":"e esell","breakdown-group":"any","breakdown":"ent sm xfin","unit-measure":"pc ent","ref-area":["BE","BG","CZ","DK","DE","EE","IE","EL","ES","FR","IT","CY","LV","LT","LU","HU","MT","NL","AT","PL","PT","RO","SI","SK","FI","SE","UK","EU27"]}

Digital Connectivity

"We will have a world class digital infrastructure that enables our people to connect anytime, anywhere using any device"

Scotland's Digital Connectivity performance has been measured using the following sources:

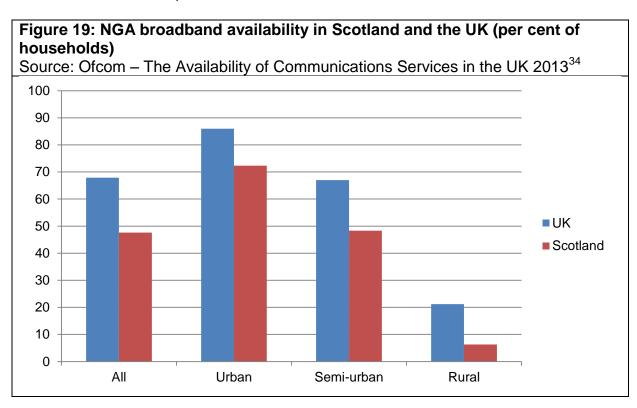
- Ofcom
- European Commission Digital Agenda Scoreboard

The Scottish Government's data source on digital connectivity is Ofcom, which is the most appropriate source currently available. However, consideration is being given to whether alternative sources can be utilised

Fixed broadband

In 2012, NGA³³ broadband was available to 47.6 per cent of all households in Scotland (Figure 19). The availability rate for urban households was 72.3 per cent compared with 48.3 per cent of semi-urban households and 6.3 per cent of rural households.

NGA broadband was available to a lower proportion of households in Scotland (47.6 per cent) than the UK as a whole (67.9 per cent). In the UK, 86 per cent of households in urban areas had NGA availability compared with 67 per cent in semi-urban areas and 21.2 per cent in rural areas.

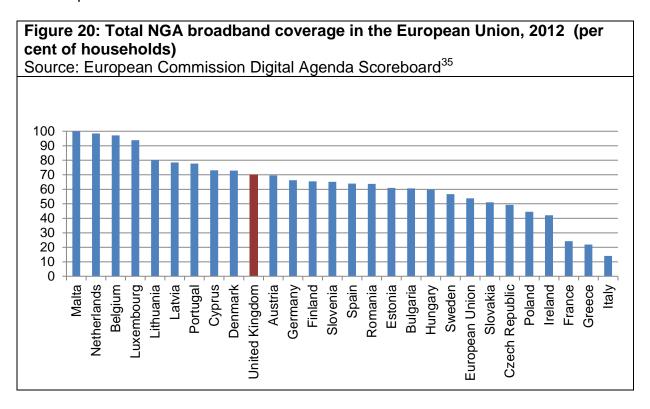


33 Next Generation Access Broadband is defined as affording actual headline download speeds of at least 30 Mbps.

http://stakeholders.ofcom.org.uk/binaries/research/markets-infrastructure/economic-geography.pdf

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Whilst there are differences in the time period considered and data sources used, comparing the UK and the EU-27, the UK was ranked 10th with 70.3 per cent of households with NGA broadband coverage in 2012. This was above the EU average of 53.8 per cent of households.



Due to differences in data sources available for NGA coverage in Scotland and the European Union, no strict comparisons can be made. However, for illustrative purposes, Scottish figures from Ofcom's "The Availability of Communications Services in the UK 2013" report have been added to the European data to illustrate how Scotland might rank in a European context. In addition, Figure 21 also illustrates Scotland's potential European ranking following achievement of total NGA coverage of 85 per cent by 2015/16 and 95 per cent by 2017/18 are achieved, as stated in Scotland's Digital Future – An Infrastructure Action plan.

Figure 21 below shows that with NGA coverage of 47.6 per cent of households in 2012 Scotland ranked 23rd when compared with the European Union, below the EU average of 53.8 per cent. However, assuming no change in NGA coverage in other European nations, the roll-out of NGA coverage under "Step Change 2015", Scotland's ranking could improve significantly to 6th in 2015/16 and 4th in 2017/18.

area":["BE","BG","CZ","DK","DE","EE","IE","EL","ES","FR","IT","CY","LV","LT","LU","HU","MT","NL","AT","PL","PT","RO","SI","SK","FI","SE","UK","EU27"]}

³⁵http://digital-agenda-data.eu/charts/analyse-one-indicator-and-compare-countries#chart={"indicator-group":"broadband","indicator":"bb_ngacov","breakdown-group":"any","breakdown":"TOTAL_POPHH","unit-measure":"pc_hh_all","ref-

Figure 21: Total NGA broadband coverage in the European Union, 2012 (per cent of households)

Source: Ofcom – The Availability of Communications Services in the UK 2013 and European Commission Digital Agenda Scoreboard

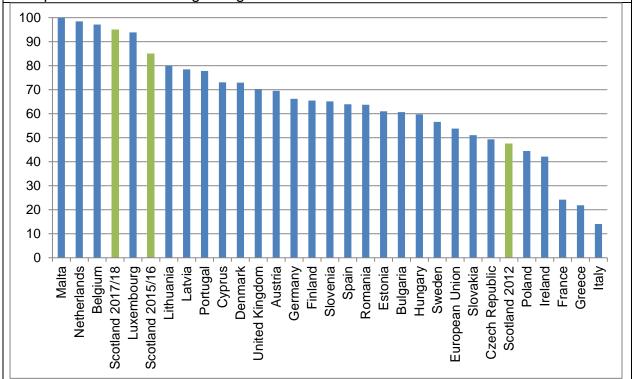
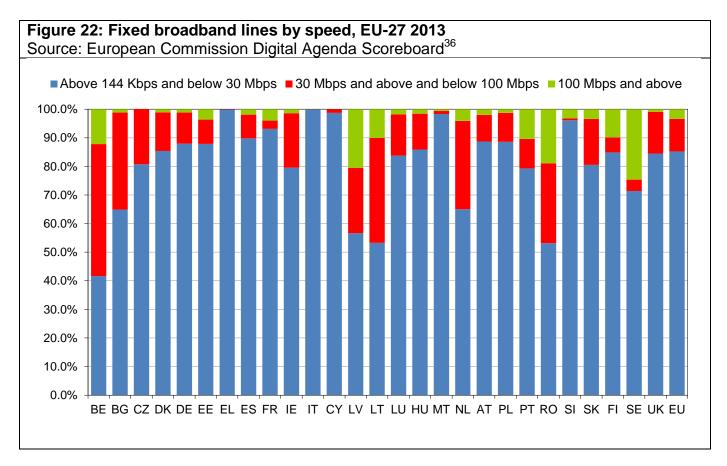


Figure 22 shows fixed broadband lines according to speed in EU-27 countries in 2013. Fixed broadband speeds above 100 Mbps corresponds to what the European Commission defines as ultrafast broadband. The EU goal is for at least 50 per cent of European households to subscribe to internet connections above 100 Mbps by 2020.

- The UK ranked 10th amongst countries with fixed broadband lines with a speed of between 30 Mbps and above and below 100 Mbps (14.5 per cent of broadband lines).
- Belgium had the greatest proportion of fixed broadband lines speeds above 30 Mbps (58.4 per cent).
- 0.9 per cent of fixed broadband lines in the UK were of speeds above 100 Mbps.



Mobile coverage

In 2012, 72.5 and 49.2 per cent of the Scottish landmass had 2G and 3G coverage respectively, compared with 87.2 and 75.8 per cent respectively in the UK (Figure 23) with slight differences in coverage between urban and rural areas.

- 97 per cent of premises in Scotland had 3G coverage provided by at least one operator in 2012 compared with 99.1 per cent in the UK.
- 98.9 per cent of premises Scottish urban areas 99.7 per cent in UK urban areas had 3G coverage provided by at least one operator compared with 91.7 per cent and 96.6 per cent of rural areas in Scotland and the UK respectively.

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³⁶https://ec.europa.eu/digital-agenda/sites/digital-agenda/files/DAE%20SCOREBOARD%202013%20-%20SWD%202013%20217%20FINAL.pdf

Figure 23: Mobile coverage in Scotland and the UK (percentage of landmass)

Source: Ofcom – The Availability of Communications Services in the UK 2013³⁷

100

80

60

40

20

0

UK Scotland

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³⁷ http://stakeholders.ofcom.org.uk/binaries/research/markets-infrastructure/economic-geography.pdf



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