



The Communications Market in Scotland

5 Telecoms and networks

5.1 Telecoms and networks

5.1.1 Recent developments in Scotland

BT's fibre-based broadband now available to more than 30,000 homes and businesses

An increasing number of areas in Scotland now have access to BT's super-fast broadband; fibre-to-the-cabinet (FTTC) technology that delivers download speeds of up to 40Mbit/s – with the prospect of 60Mbit/s in the future. Upload speeds will also be faster. These will enable households to run multiple bandwidth-hungry applications at the same time. For example, some members of a family could be watching different high definition (HD) movies, while others are gaming or working on complex graphics or video projects. Music tracks could potentially be downloaded in less than five seconds.

By the end of July 2010, BT had upgraded 11 exchange areas in Scotland:

- Halfway, Western, Bridgeton, Giffnock, Newton Mearns and Bothwell in the Glasgow area;
- Dean, Corstorphine and Craiglockhart in Edinburgh;
- Livingston Station, and
- Dalgety Bay.

Dunfermline is due for completion by the end of August.

The total number of homes passed in Scotland is around 82,000, with a further 20,000 to be added when Dunfermline is completed²⁸.

Improving broadband access

In a separate project, BT is investing £3m in a programme of upgrades to 81 rural and remote exchanges across Scotland, which are all experiencing capacity issues. The programme, which is now three-quarters complete, is scheduled to be complete by the end of November 2010.

On 1 July 2010, the Cabinet Secretary for Rural Affairs and the Environment announced that rural communities will be able to bid for a share of a €1m fund to bring enhanced broadband to their areas. The new investment is being delivered by the LEADER scheme which supports small-scale, community-driven projects in rural areas and is aimed at improving coverage and bringing faster broadband to rural communities.

Pathfinder now live

In February 2010 the Pathfinder North network, a seven-year, £70m contract, part-funded by the Scottish Government, went live. This connects 801 sites between five Highlands and Islands local authorities: Moray, Argyll and Bute, Orkney Islands and Shetland Islands. As a result of this project, these five authorities have been able to move closer to providing connectivity that enables all schools, libraries and council office sites to benefit from high-speed broadband. The next-generation network, run on the Cable & Wireless Worldwide IP

²⁸ Source: BT Scotland

virtual private network (VPN), allows teachers to share resources and children to learn in new ways, such as accessing online libraries and video conferencing with subject experts.

Connected Communities

The Connected Communities broadband network in the Outer Hebrides is one of the largest wireless networks in the UK, providing broadband services to people in eleven islands spanning over 200 kilometres. Coverage includes many of the smallest villages and hamlets on the islands, including the village of Rhenigidale in the Isle of Harris. Due to the village's remoteness and the surrounding mountainous terrain, broadband is now provided by a combination of underground fibre and wireless. As well as enhancing coverage within the Connected Communities area, the service provides broadband to many areas already enabled by BT, but which are so far from an exchange that it would not be possible to receive ADSL services.

The network connects hospitals, schools, health centres, fire services, airports and learning centres, as well as business and residential subscribers. Transport Scotland has recently delivered an integrated solution across the network to serve many of the transport hubs on the islands. This allows ticketing machines on buses to synchronise data on passenger numbers and fare categories on each route, which in turn automates payments to bus operators for subsidised fares.

Airwave in Strathclyde Partnership for Transport Subway

Glasgow's subway is the world's third oldest underground railway, after London and Budapest. It forms a small circle in the centre-west of Glasgow, with fifteen stations over a 10 km route constructed with twin tunnels.

By 2006 its existing sub-surface radio system was obsolete, and it needed a new communications system. SPT Glasgow Subway decided that a single TETRA (Terrestrial Trunked Radio) Communications system, encompassing interoperability, was the solution.

SPT-GS applied to Ofcom and obtained all the licences necessary to operate an encrypted Airwave TETRA system within the Glasgow subway, to enable operational and emergency communications.

Migration to this digital system is well advanced and trains are now fitted with Airwave cab radios which give good quality communications to the control room. Airwave handsets are being introduced for station staff, engineering staff and management. They will enable effective communications in co-ordinating and improving the service to the public on a daily basis and help greatly in the case of major incidents.

5.1.2 Availability

Fixed voice telephony and narrowband internet availability

Fixed voice telephony over the public switched telephony network (PSTN) is available to all of the UK population under the universal service obligation (USO) which is provided by BT and Kingston Communications, the incumbent operator in Kingston upon Hull. Under the USO, BT and Kingston Communications are required to provide a connection to the fixed telephony network upon reasonable request, meaning that all households have access to a fixed line, although where installation will cost over £3,400 the customer is required to pay the excess costs (plus the standard connection charge).

A narrowband internet connection is defined as one which has a connection speed of less than 128kbit/s, which is not 'always on' and which does not allow simultaneous voice calls. The USO also includes the provision of a narrowband connection capable of 'functional internet access', i.e. a connection speed of at least 28.8kbit/s.

The requirements to connect to the internet using a narrowband connection are a standard fixed telephony line, a suitably equipped PC and a narrowband account with an internet service provider. The availability of narrowband internet access is therefore virtually identical to that of fixed telephony services and there are no significant issues regarding the availability of narrowband internet services in the UK.

Broadband internet availability

Narrowband internet connections have largely been superseded by higher-bandwidth broadband connections, and we estimate that at the end of 2009 around 92% of UK residential internet connections were broadband, compared to 42% five years earlier.

In the UK the two main technologies for supplying broadband internet services are a digital subscriber line (DSL) over a standard copper telephone line connected to a DSL or LLU-enabled local exchange, or a cable modem connected to a cable provider's hybrid fibre-coaxial network. The first UK fibre deployments are currently being rolled out, but these account for only a small proportion of total UK broadband connections, as do those using satellite and fixed wireless technologies, which are typically used in remote areas, or to fill coverage not-spots.

DSL broadband availability

Almost all homes in Scotland are connected to a DSL-enabled local exchange but not all of these will be able to receive broadband

As the UK availability of DSL broadband is higher than that of cable-based services, it provides a good proxy for overall broadband availability. At the end of December 2009 over 99.9% of UK households were connected to a DSL-enabled BT local exchange (Figure 5.1) and only 27 of BT's 5,587 local exchanges were not DSL-enabled (down from 28 at the end of 2008).

In Scotland over 99.8% of homes were connected to a DSL-enabled local exchange at the end of 2009, a slightly lower proportion than the UK average of 99.98%. Wales and Northern Ireland were the only nations where all local exchanges were DSL-enabled, and Scotland had the lowest proportion of households that were connected to a DSL-enabled exchange.

However, not every household served by a DSL-enabled exchange will be able to receive broadband services, or may only be able to do so at low speeds. This is due to factors such as the distance from the exchange, poor network quality and local technicalities. People

living in these areas (known as not-spots) will not be able to fully benefit from the rapidly growing number of online services that require higher connection speeds, such as the streaming of audio-visual content. Not-spots are considered in more depth in section 1.4 of this report.

Figure 5.1 Proportion of households connected to a DSL-enabled BT exchange



Source: Ofcom / BT, December 2009 data

LLU broadband availability

Under LLU an alternative provider sites its own equipment in the BT (or Kingston Communications) local exchange. This is then connected to the LLU provider's core network and to the end-user's premises using the local loop, which is leased from either BT or Kingston Communications and is used to provide DSL broadband services (and fixed voice services in the case of full LLU). There are three main benefits to LLU:

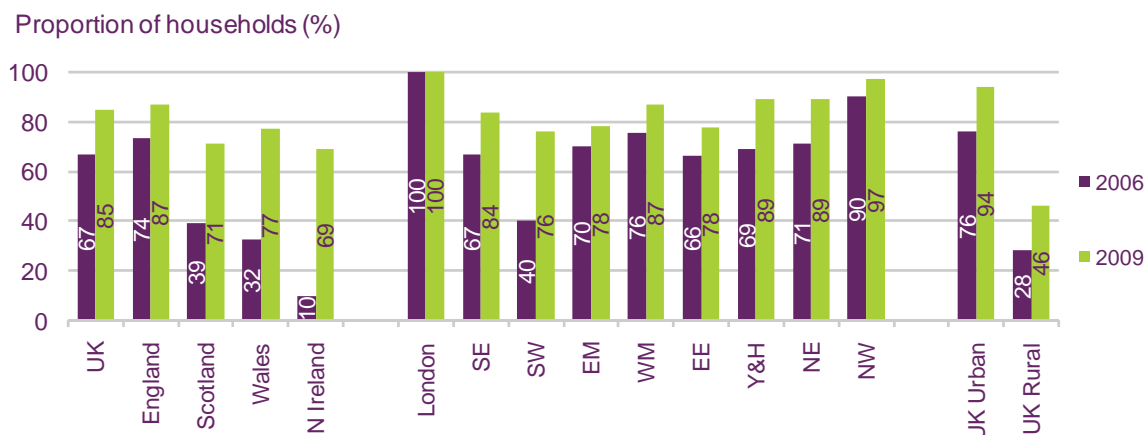
- it allows the LLU provider to take advantage of economies of scale that are not available to it when using wholesale services from BT or Kingston Communications purchased on a per-unit basis;
- it enables LLU providers to be more innovative with their products and tariffs; and
- it increases the choice of services available to the end-user.

At the end of 2009 LLU-based connections accounted for 35% of all UK non-corporate broadband connections, up from 32% a year previously, and in 2009 LLU accounted for 90% of net non-corporate broadband additions.

85% of UK homes are connected to an LLU-enabled local exchange

At the end of December 2009, 85% of UK households were connected to an LLU-enabled local exchange (Figure 5.2), less than one percentage point higher than the figure at the end of 2008 and up from 67% three years previously. Scotland had the third-highest proportion of households connected to an LLU-enabled exchange among the UK nations at the end of December 2009, at 71%. This represented a 32 percentage point increase since the end of 2006, the third-highest growth among the UK nations over the period.

Figure 5.2 Proportion of households connected to an unbundled exchange, 2006 and 2009



Source: Ofcom / BT, data as at December of each year

Urban households more than twice as likely as rural ones to be able to access LLU broadband services

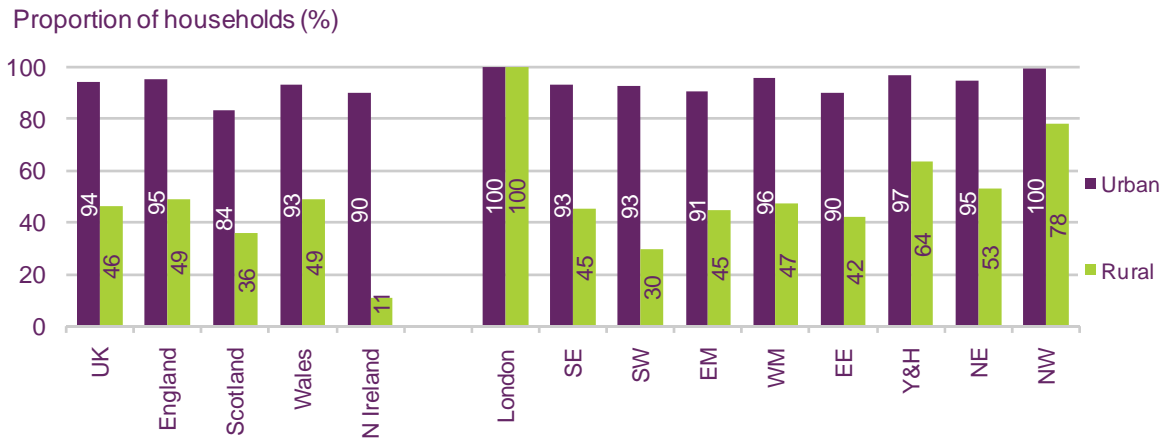
The availability of LLU-based DSL broadband services is higher in urban areas than rural ones. There are two reasons for this. Firstly, LLU deployment is characterised by high up-front costs and low per-unit costs, so operators have targeted exchanges with a large number of delivery points (which tend to be in urban areas) and secondly, because the maximum distance over which LLU broadband equipment can be backhauled to an operator's core network is approximately 40km (around 25 miles).

The results of this can be seen in Figure 5.3, which shows that at the end of December 2009, homes in urban areas were more than twice as likely as those in rural ones to be able to get LLU-based broadband services, with 94% of urban UK homes being in an unbundled area compared to 46% in rural areas.

The availability of LLU broadband services is higher in urban than rural areas in all of the UK's nations and regions, with the exception of London. The analysis used in this report designates an exchange area as being urban or rural according to where the exchange is cited, and in some cases this designation will differ from that of the area covered by the exchange. This is why several urban areas of London are classed as being rural in our analysis.

Among the UK nations, the proportion of urban homes connected to an LLU-enabled exchange ranged from 84% in Scotland to 95% in England, while in rural areas the proportion was lowest in Northern Ireland at 11% and highest in England and Wales at 49%. The comparatively low availability of LLU in both urban and rural areas of Scotland is partly due to the fact that, on average, exchanges in Scotland serve a lower number of households than in the other nations, making them less attractive to LLU providers.

Figure 5.3 Proportion of households in urban and rural areas connected to an unbundled exchange

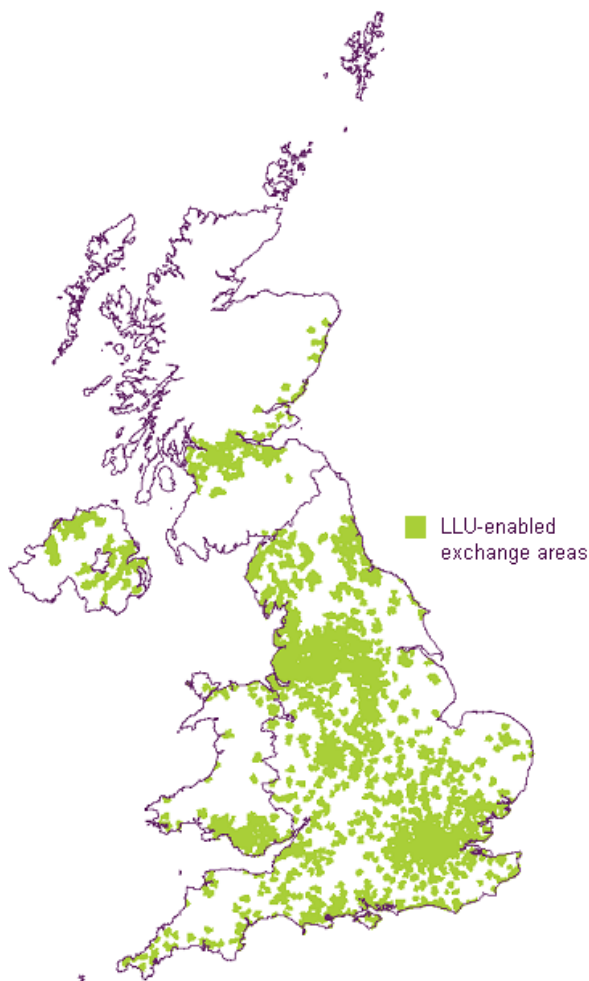


Source: Ofcom / BT, December 2009 data

Map of LLU DSL availability reflects higher availability in urban areas

The map in Figure 5.4 shows that the areas served by unbundled local exchanges tend to be in urban locations.

Figure 5.4 Map showing areas served by unbundled local exchanges



Source: Ofcom / BT, September 2009 data

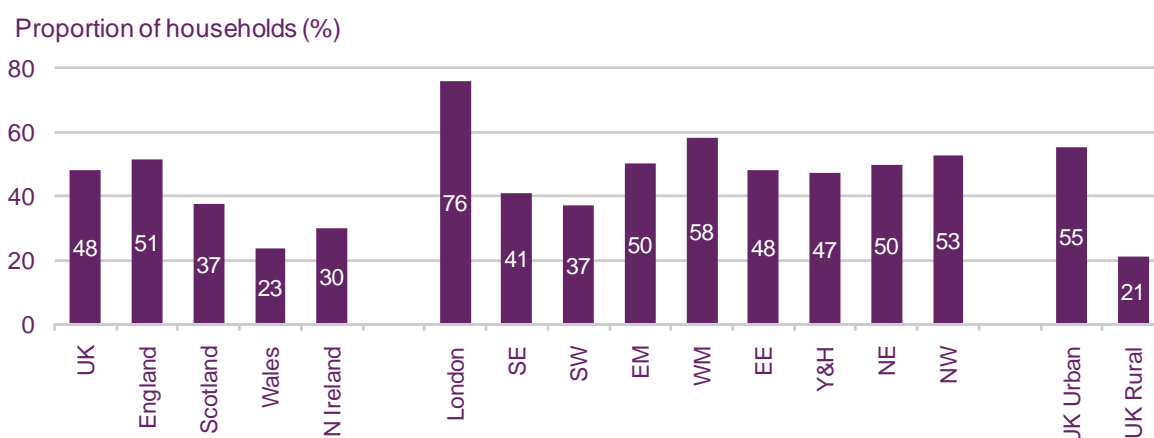
Cable broadband availability

Scotland had the second-highest cable broadband availability among the UK nations at the end of 2009

Just under half of all UK households (48%) were passed by Virgin Media's broadband-enabled cable network at the end of December 2009 (Figure 5.5). This figure has remained relatively stable over the past few years, as the high costs related to cable network roll-out have meant that Virgin Media has concentrated its efforts on upgrades to its existing network and increasing take-up in cabled areas. However, it is investing £100m on expanding its network to a further 500,000 homes and has announced²⁹ that it is to trial delivering broadband services over telegraph poles, having identified more than a million UK homes that could benefit from such deployments.

Among the UK nations, Scotland had the second-highest proportion of homes passed by Virgin Media's broadband network at the end of 2009, at 37%, while the proportion was highest in England at 51% and lowest in Wales at 23%. It is unclear as to where in the UK any future Virgin Media broadband network rollout will take place.

Figure 5.5 Proportion of households passed by Virgin Media broadband



Source: Ofcom / Virgin Media, December 2009 data

Scotland has the second highest proportion of both urban and rural homes passed by Virgin Media's cable broadband network

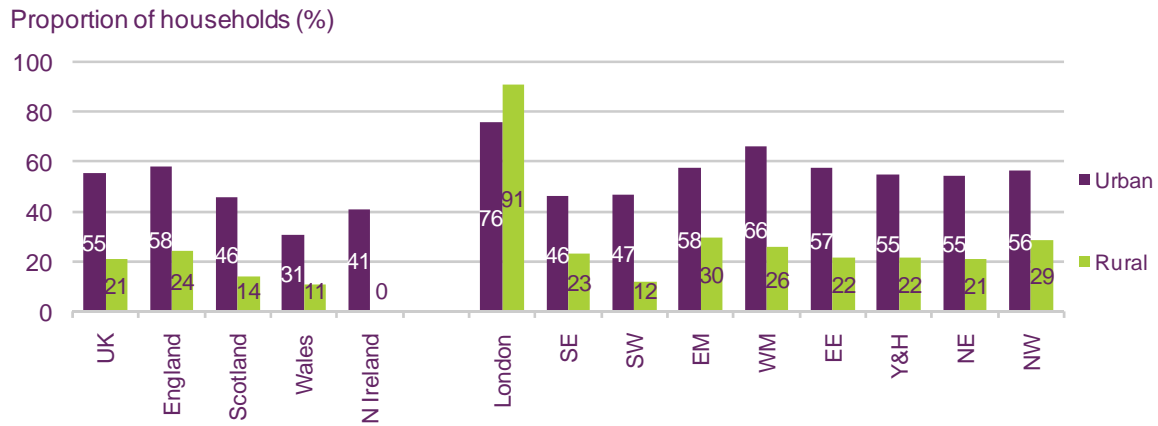
The majority of cable network roll-out in the UK took place in the 1980's and 1990's and was concentrated in urban areas in order to maximise the number of homes and businesses covered, and therefore turnover, for the operator's network spend. Figure 5.6 shows that 55% of UK households in urban areas were passed by Virgin Media's broadband network at the end of 2009, but it passed only 21% of households in rural areas.

In all of the UK nations and regions except London, broadband availability was higher in urban areas than in rural areas (for the data categorisation reason identified previously). Among the UK nations the proportion of urban households passed by Virgin Media's cable broadband network was highest, at 58%, in England, and lowest, at 31%, in Wales. Similarly, the proportion in rural areas ranged from 24% in England to 0% in Northern

²⁹ <http://pressoffice.virginmedia.com/phoenix.zhtml?c=205406&p=irol-newsArticle&ID=1401380&highlight=>

Ireland. In Scotland 46% of urban homes and 14% of rural ones were passed by Virgin Media's cable broadband network, the second highest proportion for each.

Figure 5.6 Proportion of households in urban and rural areas passed by Virgin Media broadband

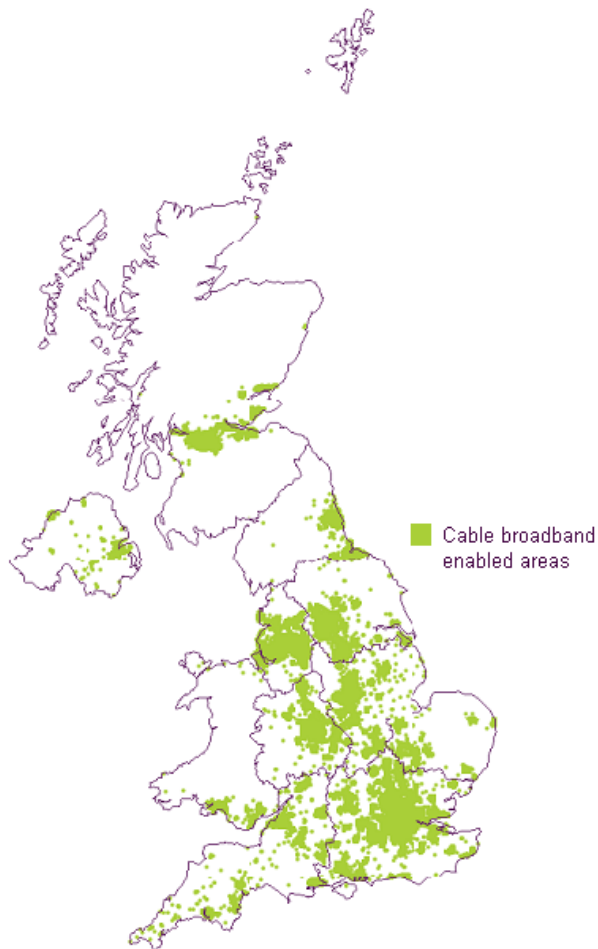


Source: Ofcom / Virgin Media, December 2009 data

As with LLU DSL, cable broadband availability is concentrated in urban areas

Similarly, the map in Figure 5.7 below shows that cable availability is concentrated in urban areas.

Figure 5.7 Map of the availability of Virgin Media cable broadband



Source: Ofcom / Virgin Media, September 2009 data

Mobile

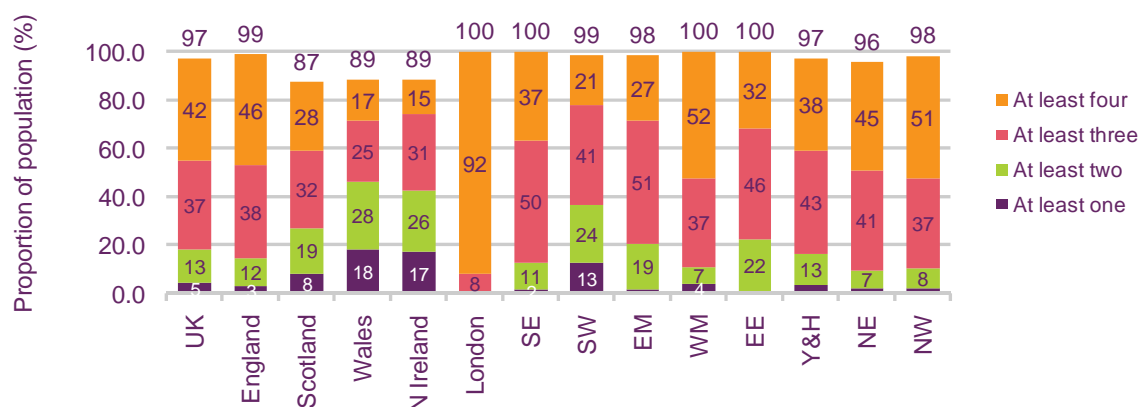
2G

As discussed in our coverage of not-spots in section 1.4 in this report, we evaluate the availability of mobile telephony across the UK by examining the number of mobile networks with second-generation (2G) and third-generation (3G) coverage in each postcode district.

Figure 5.8 shows that 87% of the population in Scotland lived in a postcode district with at least 90% 3G area coverage from one or more of the mobile networks in Q2 2010. This is lower than the UK overall (97%), England (99%), Wales (89%) and Northern Ireland (89%).

Within those areas in Scotland with at least 90% coverage, two-thirds have the choice of three or four operators providing area coverage above the threshold, while the remainder are limited to one or two operators.

Figure 5.8 2G mobile phone population coverage, by number of operators



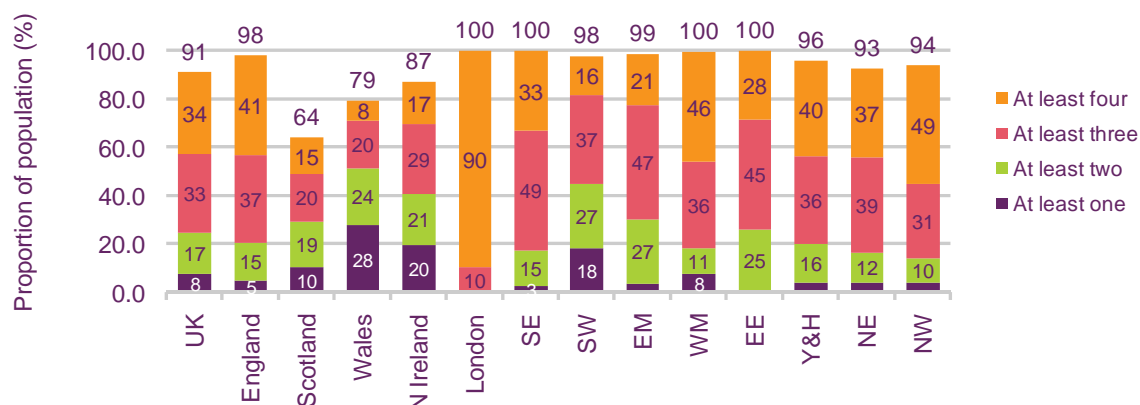
Source: Ofcom/ GSM Association / Europa Technologies; Q2 2010

Note: Figures show the percentage of population within postcode districts where at least one, two, three, four or five operators had at least 90% 2G area coverage; data not directly comparable to those published in the 2009 report.

Figure 5.9 shows the geographic coverage of 2G services (using the same 90% area coverage threshold) with 64% of postcode districts within Scotland covered by one or more mobile networks; 23 percentage points lower than population coverage. Scotland had the lowest geographic coverage among the nations, below Wales (79%), Northern Ireland (87%) and England (91%).

Just under half (45%) of postcode districts with 90% area coverage in Scotland were served by one or two providers, with the remaining 55% receiving 2G area coverage from three or four providers.

Figure 5.9 2G mobile phone geographic coverage, by number of operators



Source: Ofcom/ GSM Association / Europa Technologies; Q2 2010

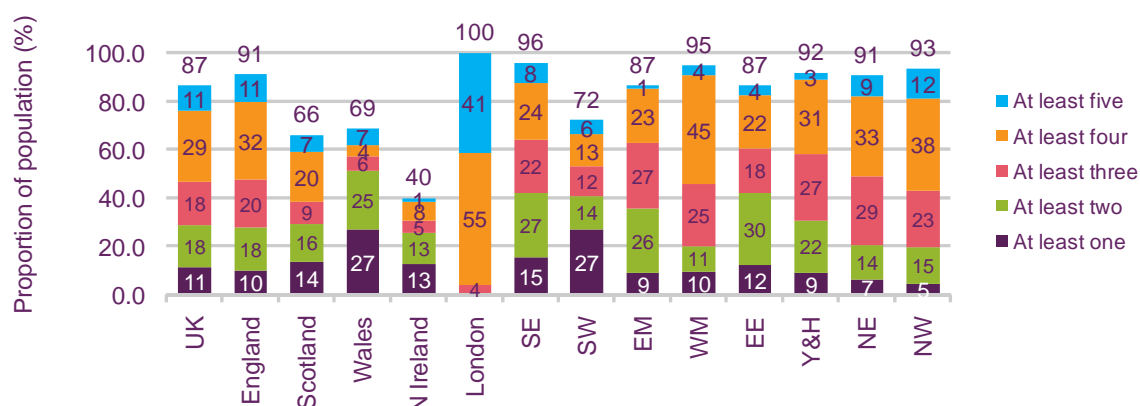
Note: Figures show the percentage of postcode districts where at least one, two, three, four or five operators had at least 90% 2G area coverage; data not directly comparable to those published in the 2009 report.

3G

Figure 5.10 shows that 66% of the population in Scotland lived in a postcode district with at least 90% 3G area coverage from one or more of the mobile networks in Q2 2010; lower than England (91%) and Wales (69%), but higher than Northern Ireland (40%). Less than half (44%) of those covered in Scotland were limited to one or two providers exceeding the

threshold, while the remainder were living in an area where three or more providers offered 90% 3G area coverage.

Figure 5.10 3G mobile phone population coverage, by number of operators



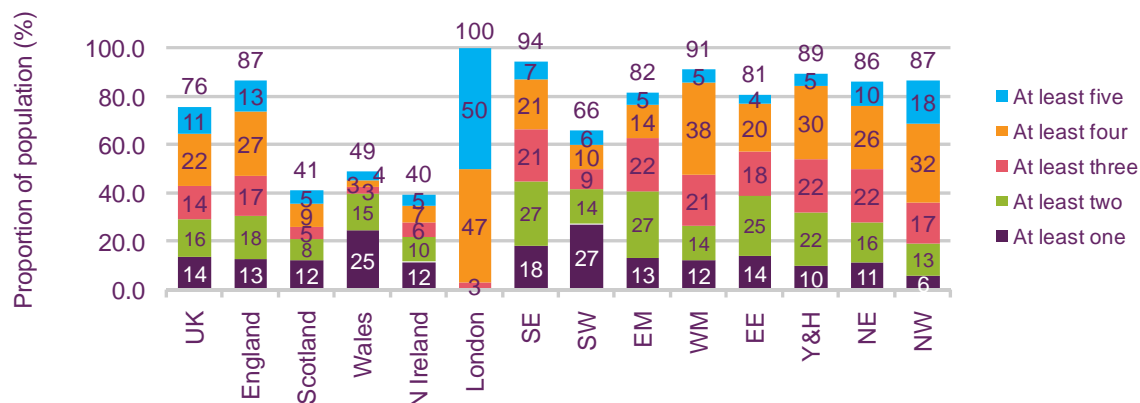
Source: Ofcom/ GSM Association / Europa Technologies; Q2 2010

Note: Figures show the percentage of population within postcode districts where at least one, two, three, four or five operators had at least 90% 3G area coverage; data not directly comparable to that published in the 2009 report.

Figure 5.11 shows the geographic coverage of 3G services by one or more mobile networks above the 90% threshold. Forty-one per cent of postcode districts in Scotland had 3G area coverage from one or more mobile networks, lower than the UK overall (76%) and Wales (49%), but higher than Northern Ireland (40%).

Just under a third (29%) of the covered districts in Scotland had 3G coverage at a 90% area threshold from just one 3G network, while one in three had coverage from at least four operators or more.

Figure 5.11 3G mobile phone geographic coverage by number of operators



Source: Ofcom/ GSM Association / Europa Technologies; Q2 2010

Note: Figures show the percentage of postcode districts where at least one, two, three, four or five operators had at least 90% 3G area coverage; data not directly comparable to that published in the 2009 report.

5.1.3 Service take-up

Fixed line take-up is lower in Scotland than the UK average

Household take-up of fixed-line telephony in Scotland is the same as in Wales (79%) and is lower than the UK average (85%) (see Figure 5.12). There was a significant difference in

fixed-line take-up between Scotland's urban (77%) and rural areas (88%). This is consistent with the higher use of fixed-line telephony in rural areas across the UK, with a greater proportion of homes in urban areas being solely reliant on mobile telephony. In part this may be due to a greater proportion of rented and shared accommodation in urban areas, where residents are more likely to rely on mobile telephony alone (mobile telephony is typically an individual purchase, whereas fixed telephony is a household purchase).

In general, younger households and households in lower socio-economic groups are more likely to be mobile-only, and a higher proportion of these households are in urban areas. Another potential factor may be that mobile coverage is typically better in urban than in rural areas, meaning that rural consumers may be less willing to rely on mobile for all their telephony needs.

Mobile phone ownership in Scotland, at 85%, was the lowest among the UK nations, with ownership at its lowest (80%) in Scotland's rural areas. Homes in Scotland's urban areas, particularly Glasgow, Clyde and Lanarkshire, were more likely than average to be without a fixed-line phone at home and to rely solely on mobile telephony.

Internet penetration, at 64% in Scotland, is below the UK average of 71%, although (in common with the UK), in Scotland most internet connections are now broadband, with take-up standing at 61%.

Within Scotland, broadband and internet take-up was highest in Lothian and Forth Valley (72%) and lowest in Glasgow, Clyde and Lanarkshire and 'other' areas of Scotland (53%).

Figure 5.12 Take-up of communications services, 2010

		UK	Scotland	England	Wales	N Ireland	UK Urban	UK Rural
Individual								
Voice telephony	Fixed Line	85%	79%	86%	79%	81%	84%	91%
	Mobile	89%	85%	90%	89%	88%	89%	90%
Internet	PC	76%	66%	77%	70%	75%	75%	80%
	Total Internet	73%	64%	75%	66%	73%	73%	77%
	Broadband (fixed and mobile)	71%	61%	73%	64%	70%	70%	75%
	Fixed Broadband	65%	54%	66%	57%	62%	64%	71%
	Mobile Broadband	15%	12%	15%	16%	14%	16%	11%

		Scotland	Scot urban	Scot rural	Glasgow, Clyde & L'shire	Lothian & Forth	Grampian, Tayside & Fife	Other Scotland
Individual								
Voice telephony	Fixed Line	79%	77%	88%	70%	86%	87%	79%
	Mobile	85%	86%	80%	84%	88%	87%	79%
Internet	PC	66%	65%	68%	58%	74%	74%	58%
	Total Internet	64%	63%	65%	57%	72%	71%	57%
	Broadband (fixed and mobile)	61%	61%	60%	53%	72%	68%	53%
	Fixed Broadband	54%	54%	58%	45%	67%	61%	48%
	Mobile Broadband	12%	13%	10%	10%	14%	18%	8%

Source: Ofcom research, Q1 2010

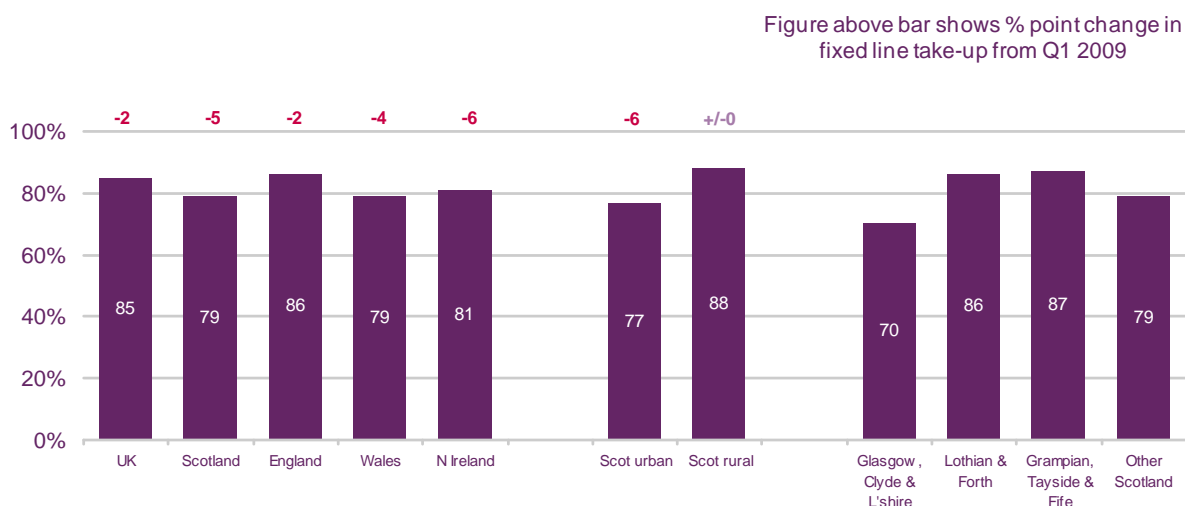
Base: All adults aged 15+ (n = 9013 UK, 1468 Scotland, 5709 England, 1075 Wales, 761 Northern Ireland, 1172 Scotland urban, 296 Scotland rural, 368 Glasgow, Clyde & Lanarkshire, 357 Lothian & Forth Valley, 363 Grampian Tayside & Fife, 380 other Scotland)

QC1. Is there a landline phone in your home that can be used to make and receive calls? / QD2. Do you personally use a mobile phone? / QE1. Does your household have a PC or laptop computer? / QE2. Do you or does anyone in your household have access to the Internet/ World Wide Web at home? QE9. Which of these methods does your household use to connect to the Internet at home?

Fixed-line

Figure 5.13 shows fixed-line phone ownership has fallen across the UK in the last year. In Scotland it has fallen by five percentage points and now stands at 79% - joint lowest in the UK (with Wales). The decrease in fixed phone ownership has been heavily concentrated in Scotland's urban areas, with take-up in rural areas of Scotland remaining above the UK average, at 88%. Fixed phone ownership varies across Scotland. It is highest in Grampian, Tayside and Fife (87%) and lowest in Glasgow, Clyde and Lanarkshire (70%).

Figure 5.13 Fixed-line take-up



Source: Ofcom research, Q1 2010

Base: All adults aged 15+ (n = 9013 UK, 1468 Scotland, 5709 England, 1075 Wales, 761 Northern Ireland, 1172 Scotland urban, 296 Scotland rural, 368 Glasgow, Clyde & Lanarkshire, 357 Lothian & Forth Valley, 363 Grampian Tayside & Fife, 380 other Scotland)

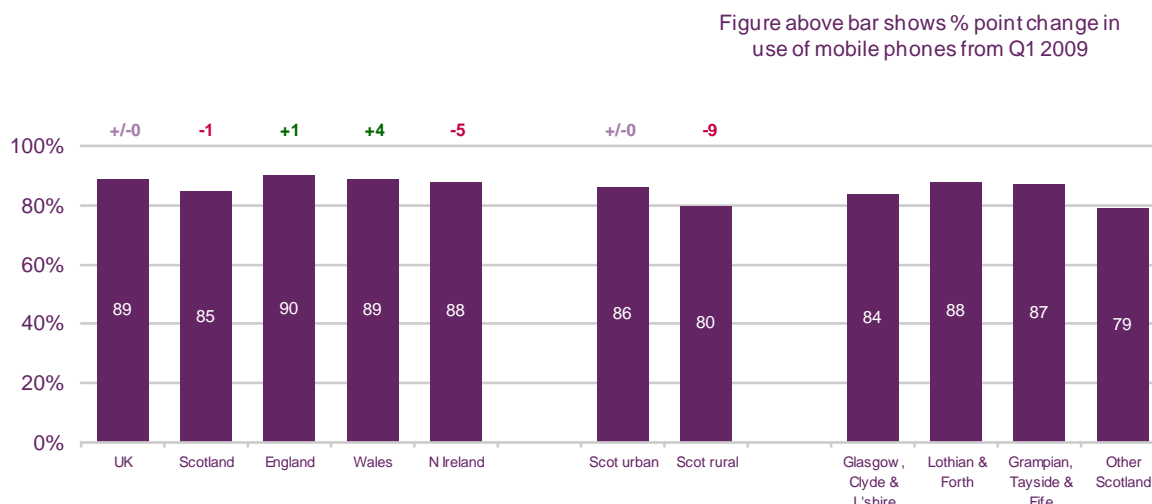
QC1. Is there a landline phone in your home that can be used to make and receive calls?

Mobile

More homes in Scotland have mobile connections than fixed-line connections

More individuals in Scotland have a mobile phone (85%) than had a fixed-line connection at home (79%). However, this is driven by urban areas. The proportion of adults in Scotland's rural areas with a mobile phone stands at 80% (see Figure 5.14). Because of the relatively low population density in rural areas this has not had a significant impact on the overall take-up level in Scotland (the one percentage point fall is within the survey's error margins).

Figure 5.14 Mobile take-up



Source: Ofcom research, Q1 2010

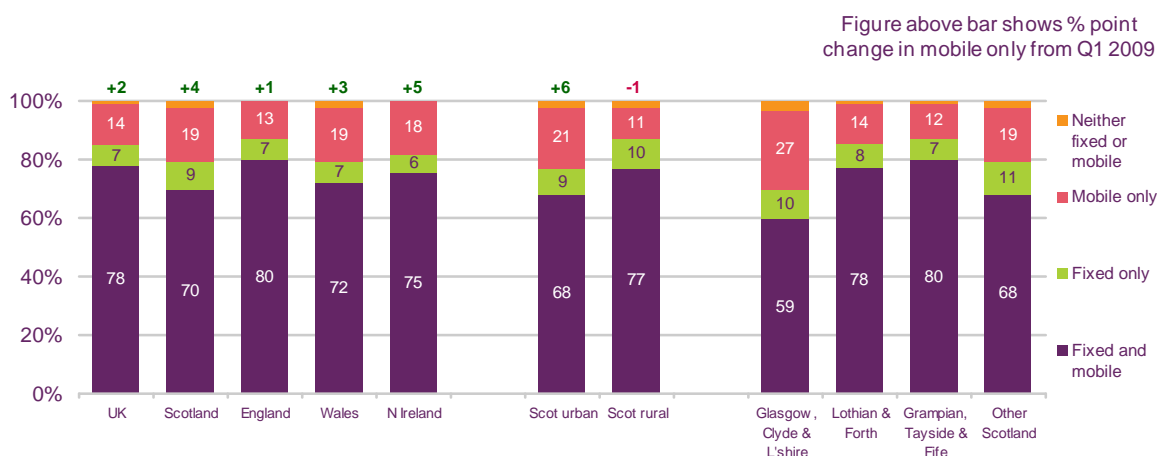
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QD2. Do you personally use a mobile phone?

The number of mobile-only households continues to rise, reaching 19% in 2010 in Scotland

The proportion of homes in Scotland that rely solely on mobile telephony continues to increase, up by two percentage points this year to 19%. Nine per cent of homes in Scotland have a fixed line only, and seven in ten have access to both fixed and mobile telephones at home. As is found across the UK, homes in Scotland's urban locations (21%) are more likely to be mobile-only than those in rural areas (11%). Those in Glasgow, Clyde and Lanarkshire are the most likely to live in mobile-only homes (27%) (Figure 5.15).

Figure 5.15 Cross-ownership of household telephony services



Source: Ofcom research, Q1 2010

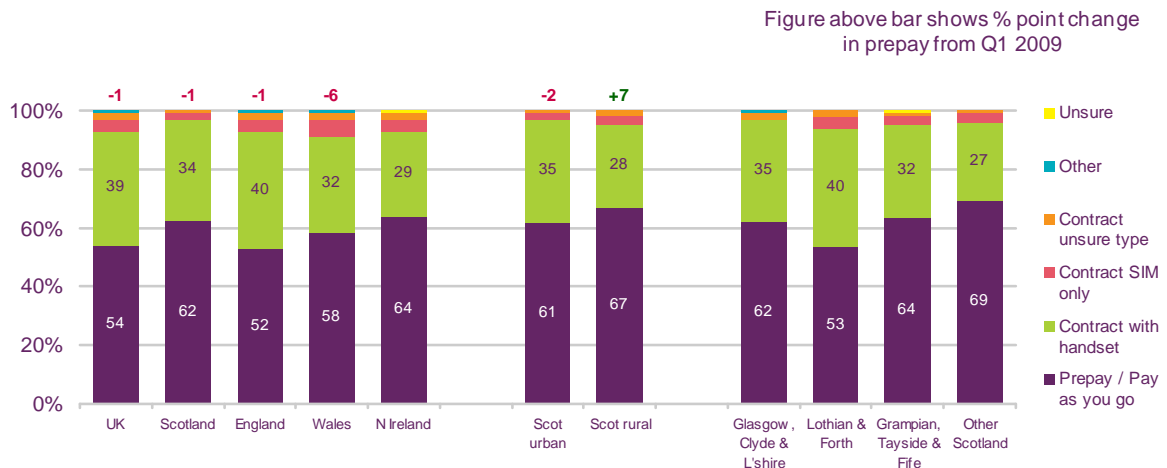
Base: All adults aged 15+ (n = 9013 UK, 1468 Scotland, 5709 England, 1075 Wales, 761 Northern Ireland, 1172 Scotland urban, 296 Scotland rural, 368 Glasgow, Clyde & Lanarkshire, 357 Lothian & Forth Valley, 363 Grampian Tayside & Fife, 380 other Scotland)

QC1. Is there a landline phone in your home that can be used to make and receive calls?/ QD1. How many mobile phones in total do you and members of your household use?

Pay-as-you-go more popular in Scotland than in the UK as a whole

Figure 5.16 shows a higher proportion of mobile phone users in Scotland are on pre-paid pay-as-you-go plans (62%) than in the UK as a whole (54%). The mix of mobile phone subscription types has been relatively stable during the past year despite the continuing economic downturn.

Figure 5.16 Type of mobile subscription



Source: Ofcom research, Q1 2010

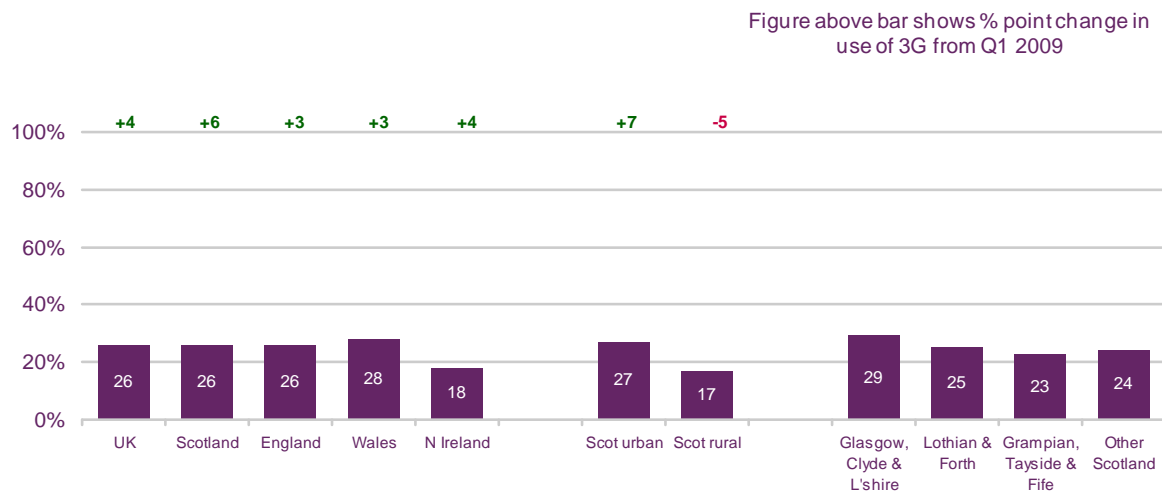
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QD11. Which of these best describes the mobile package you personally use most often?

Take-up of 3G in Scotland is equal to the UK average of 26%

Claimed take-up of 3G phone services in Scotland is equal to the UK average of 26% (Figure 5.17). Scotland has seen the fastest increase of all of the nations in take-up of 3G phones in the past year, with a rise of six percentage points. Take-up was higher in Scotland's urban areas (27%) than in rural areas (17%). However, these numbers should be treated with some caution as it is uncertain whether consumers are accurately reporting the type of handset they have.

Figure 5.17 Take-up of 3G telephony services



Source: Ofcom research, Q1 2010

Base: All adults aged 15+ (n = 9013 UK, 1468 Scotland, 5709 England, 1075 Wales, 761 Northern Ireland, 1172 Scotland urban, 296 Scotland rural, 368 Glasgow, Clyde & Lanarkshire, 357 Lothian & Forth Valley, 363 Grampian Tayside & Fife, 380 other Scotland)

QD24B: Do you personally use a 3G mobile handset – third generation mobile phones allow you to send and receive data at high speeds, allowing you to carry out activities such as making and receiving video calls – this might be for business or personal use?

Internet and broadband

One in ten adults in Scotland use the internet to make voice calls

One in ten adults in Scotland used the internet to make telephone calls in Q1 2010 - lower than the UK average and the lowest of all of the UK nations. Use of VoIP has remained relatively stable in Scotland since last year, with an increase in use of one percentage point. (Figure 5.18). However, there were indications that take-up was higher in rural areas (12%) than in urban areas (10%), although use in Scotland's rural areas has fallen in the last year. Use of VoIP was particularly low in Glasgow, Clyde & Lanarkshire, at just 4%. In Lothian & Forth Valley (14%) and Grampian Tayside & Fife (15%) VoIP use is close to the UK average.

Figure 5.18 Proportion of adults living in a household that has used VoIP



Source: Ofcom research, Q1 2010

Base: All adults aged 15+ (n = 9013 UK, 1468 Scotland, 5709 England, 1075 Wales, 761 Northern Ireland, 1172 Scotland urban, 296 Scotland rural, 368 Glasgow, Clyde & Lanarkshire, 357 Lothian & Forth Valley, 363 Grampian Tayside & Fife, 380 other Scotland)

QE29. Before now, were you aware that you could make voice calls using the internet?/ QE30. Have you or anyone in your household ever used one of these services to make voice calls using the internet?

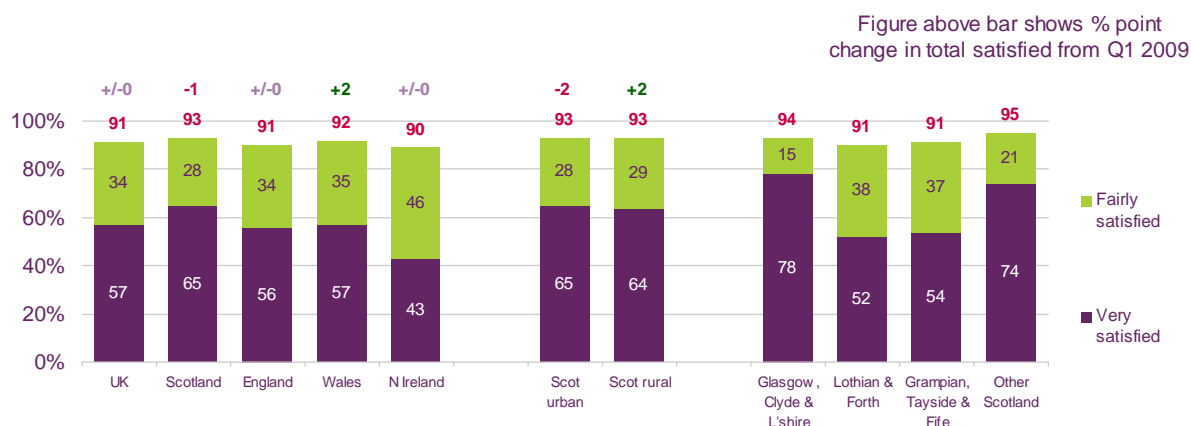
5.1.4 Satisfaction with telecoms services

Fixed-line

Overall satisfaction with fixed-line services in Scotland stands at 93%, similar to the UK average. The proportion who claimed to be very satisfied with their fixed-line service (65%) is by some distance the highest in the UK (Figure 5.19).

The overall level of satisfaction in Scotland has not changed significantly since last year and is fairly similar across Scotland, although the proportion that is very satisfied is slightly higher in Glasgow, Clyde and Lanarkshire and in 'other' areas of Scotland.

Figure 5.19 Overall satisfaction with fixed-line services

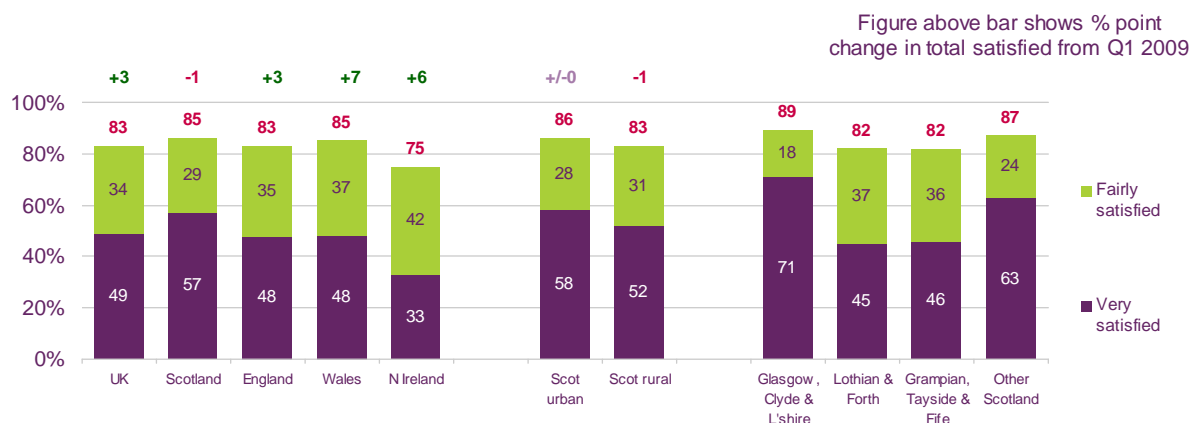


Source: Ofcom research, Q1 2010

Base: Adults aged 15+ with a landline phone at home (n = 7494 UK, 1141 Scotland, 4851 England, 874 Wales, 628 Northern Ireland, 889 Scotland urban, 252 Scotland rural, 243 Glasgow, Clyde & Lanarkshire, 301 Lothian & Forth Valley, 309 Grampian Tayside & Fife, 288 other Scotland) QC13a. Thinking about your home phone service only, how satisfied are you with (main supplier) for the overall service provided by (main supplier)?

Scotland also has the highest level of satisfaction with value for money of fixed-line services, with 85% satisfied (57% very satisfied). Satisfaction is at its highest in Glasgow, Clyde and Lanarkshire and in 'other' areas of Scotland (Figure 5.20).

Figure 5.20 Satisfaction with value for money of fixed-line service



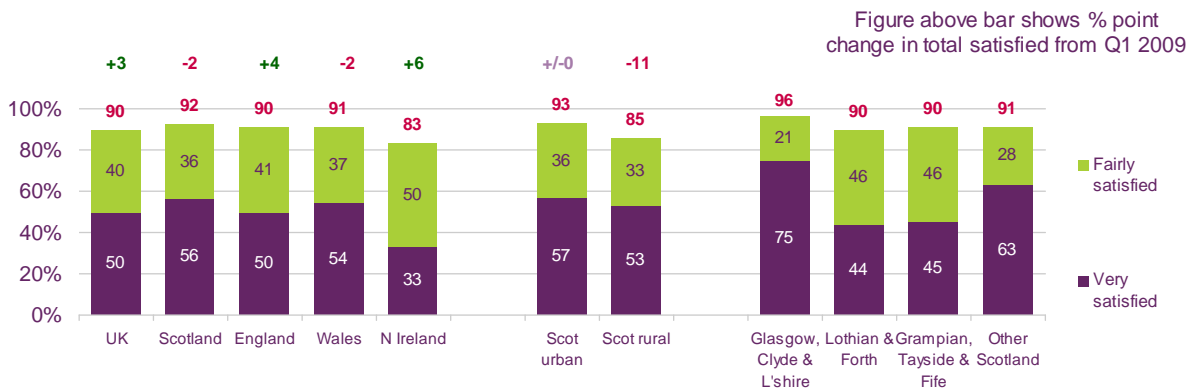
Source: Ofcom research, Q1 2010

Base: Adults aged 15+ with a landline phone at home (n = 7494 UK, 1141 Scotland, 4851 England, 874 Wales, 628 Northern Ireland, 889 Scotland urban, 252 Scotland rural, 243 Glasgow, Clyde & Lanarkshire, 301 Lothian & Forth Valley, 309 Grampian Tayside & Fife, 288 other Scotland) QC13b. Thinking about your home phone service only, how satisfied are you with (main supplier) for the overall value for money from your service?

Fixed broadband

Overall satisfaction with fixed broadband services has fallen, driven by a large drop in satisfaction in rural areas (Figure 5.21). This is likely to be related to the fall in satisfaction with speeds. Satisfaction with broadband service in urban areas remains high in Scotland, with the highest satisfaction found in Glasgow, Clyde and Lanarkshire, where satisfaction is almost universal at 96%, and three-quarters reported that they were very satisfied.

Figure 5.21 Overall satisfaction with fixed broadband service

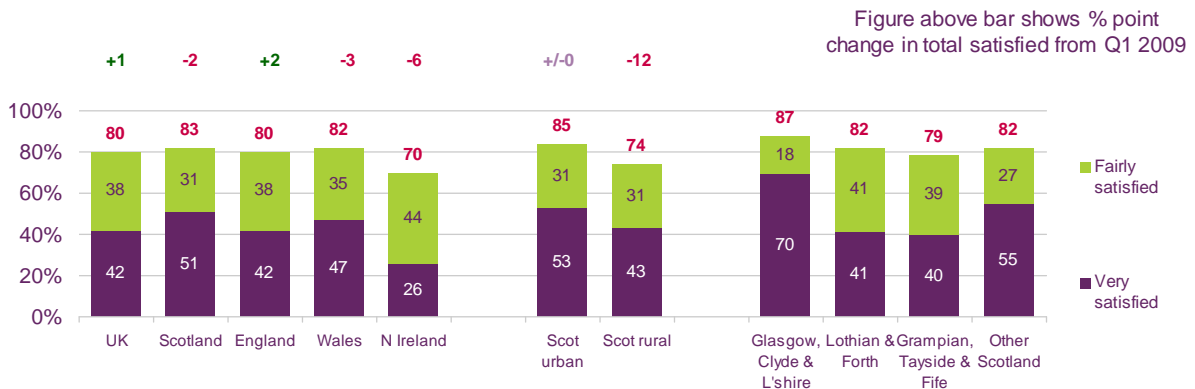


Source: Ofcom research, Q1 2010

Base: Adults aged 15+ with a fixed broadband connection at home (n= 5410 UK, 778 Scotland, 3559 England, 604 Wales, 469 Northern Ireland, 612 Scotland urban, 166 Scotland rural, 154 Glasgow, Clyde & Lanarkshire, 233 Lothian & Forth, 216 Grampian Tayside & Fife, 175 other Scotland) QE8a. Thinking about your fixed broadband internet service, how satisfied are you with (main supplier) for the overall service provided by (main supplier)?

Figure 5.22 shows that over eight in ten (83%) fixed broadband users in Scotland were either very, or fairly, satisfied with the speed of their broadband connection, a little higher than the UK average (80%). Satisfaction with broadband speed in Scotland's rural areas has fallen significantly in the past year, from 86% to 74%, perhaps signifying increased expectations of higher broadband speeds and the increased use of high bandwidth services, such as video streaming and downloading, where the user experience can differ vastly, depending on the speeds achieved.

Figure 5.22 Satisfaction with speed of fixed broadband connection



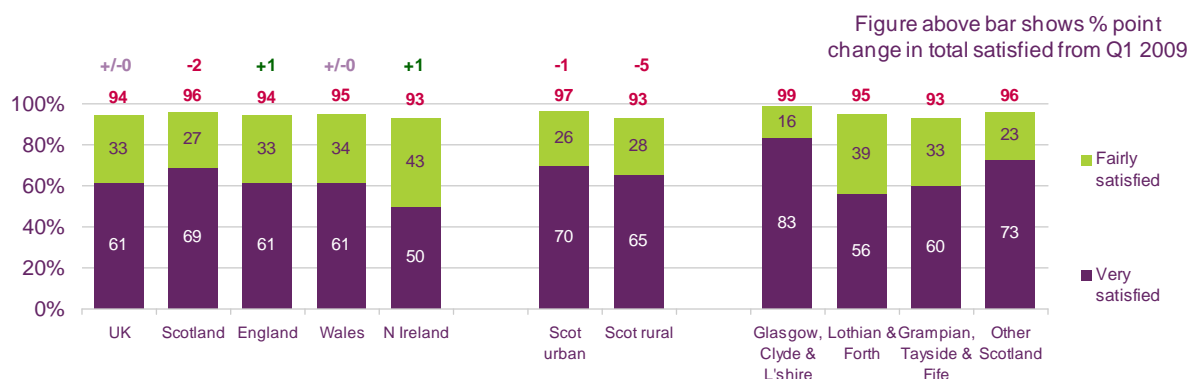
Source: Ofcom research, Q1 2010

Base: Adults aged 15+ with a fixed broadband connection at home (n= 5410 UK, 778 Scotland, 3559 England, 604 Wales, 469 Northern Ireland, 612 Scotland urban, 166 Scotland rural, 154 Glasgow, Clyde & Lanarkshire, 233 Lothian & Forth Valley, 216 Grampian Tayside & Fife, 175 other Scotland) QE18b. Thinking about your fixed broadband internet service, how satisfied are you with (main supplier) for the speed of your service while online (not just the connection)?

Mobile

Overall satisfaction with mobile phone services among mobile users in Scotland was, at 96%, the highest in the UK. Satisfaction is particularly high in Glasgow, Clyde and Lanarkshire, where 99% of mobile phone users say they are satisfied with their overall service, including 83% who say they are very satisfied. Satisfaction is lower in Scotland's rural areas (93%) than it is in Scotland's urban areas (97%) (Figure 5.23); this is likely to be related to service coverage.

Figure 5.23 Overall satisfaction with mobile phone service



Source: Ofcom research, Q1 2010

Base: Adults aged 15+ who personally use a mobile phone (n = 7826 UK, 1237 Scotland, 5008 England, 923 Wales, 658 Northern Ireland, 1001 Scotland urban, 236 Scotland rural, 308 Glasgow, Clyde & Lanarkshire, 313 Lothian & Forth, 316 Grampian Tayside & Fife, 300 other Scotland) QD21a. Thinking about your mobile phone service only, how satisfied are you with (main supplier) for the overall service provided by (main supplier)?

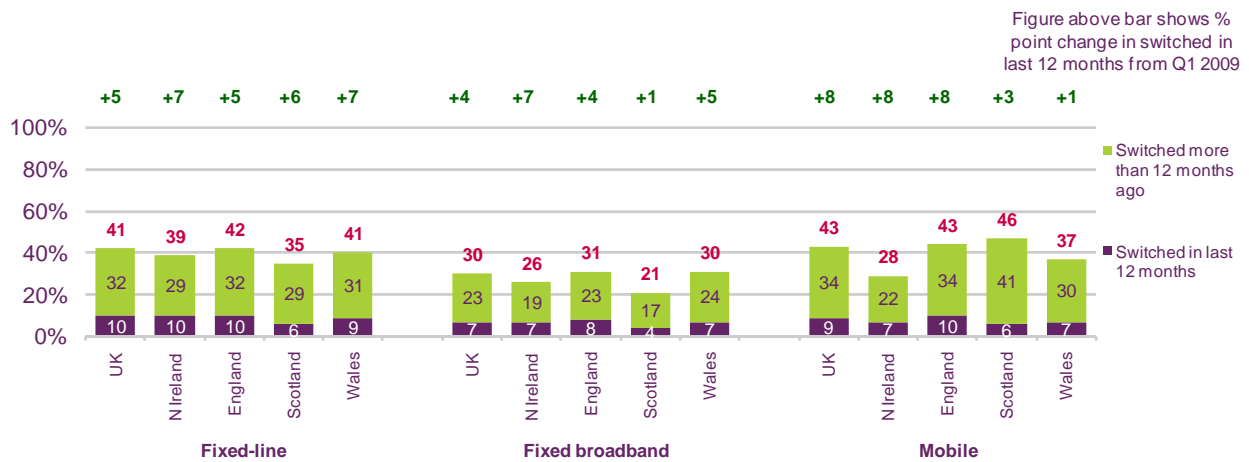
Switching

As shown in Figure 5.24, the proportion of fixed-line users who have switched provider was lower in Scotland (35%) than the UK average (41%) and all other nations in the UK. In particular, people in Scotland were less likely (at 6%) to have switched their landline supplier in the past 12 months than people living in England (10%), Northern Ireland (10%) or Wales (9%).

Twenty one per cent of people in Scotland have switched their fixed broadband supplier in the past – and 4% did so in the past year. This is much lower than the UK average (30%) and the other nations of the UK.

However, people in Scotland were more likely to have switched their mobile phone provider (46%) than the UK average (43%) and those living in England (43%), Wales (37%), and Northern Ireland (28%). In the past twelve months, fewer people in Scotland switched their mobile phone service (6%) than people living elsewhere in the UK (9%).

Figure 5.24 Fixed line, fixed broadband and mobile supplier switching



QC14a. Apart from when you moved house, have you or your household ever changed the company that provides any of your home landline phone, broadband and mobile services?

Source: Ofcom research, Q1 2010

Base: Adults aged 15+ with a landline phone at home (n = 7494 UK, 628 Northern Ireland, 4851 England, 1141 Scotland, 874 Wales, 402 Northern Ireland urban, 226 Northern Ireland rural, 291 Belfast metropolitan area, 337 rest of NI). Adults aged 15+ with a fixed broadband connection at home (n= 5410 UK, 469 Northern Ireland, 3559 England, 778 Scotland, 604 Wales, 297 Northern Ireland urban, 173 Northern Ireland rural, 230 Belfast metropolitan area, 239 rest of NI). Base: Adults aged 15+ who personally use a mobile phone (n = 7826 UK, 658 Northern Ireland, 5008 England, 1237 Scotland, 923 Wales, 428 Northern Ireland urban, 230 Northern Ireland rural, 298 Belfast metropolitan area, 360 rest of NI)

Note: Figures above chart columns indicate the proportion of people with a personal mobile phone who have ever switched supplier.