Communications Market Report: Northern Ireland

Research Document

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Introduction

Welcome to Ofcom's annual Communications Market Report for Northern Ireland. The report gives an overview of the region's communications markets, examining availability, take-up and consumption of the internet, telecommunications and broadcasting services, and comparing the findings with the other nations and the UK as a whole.

This year's report shows that the way we access the internet is changing rapidly, with the number of people in Northern Ireland owning tablet computers more than trebling in the past year.

With three in ten homes (29%) having one, Northern Ireland now has the highest rate of tablet ownership in the UK. Take-up was particularly marked in urban areas and homes with children.

The surge reflects the continuing rise in take-up and use of the internet in Northern Ireland. Eight in ten households (80%) now have access to the internet, which is on a par with the UK average. Northern Ireland also has the highest availability of fibre broadband in the UK.

The report also looks at how we access the internet on the move; smartphone ownership is up by a third, to 45%, in the past year. Linked to this, there has been a fall in the proportion of people using pre-pay mobile phone tariffs in favour of contracts.

Social media continues to be popular, with more than half (53%) accessing Facebook, Twitter and similar services online, either at home or on the move. A similar proportion (51%) say they bank online, while three in five of us (60%) purchase goods and services on the internet. Clothes and footwear, hotel and holiday bookings were the most popular online purchases.

Northern Ireland leads the way in take-up of pay TV, with two-thirds (66%) of homes having Sky, Virgin Media, or paid-for top-up services, compared with 59% for the UK as a whole.

New research, carried out for this year's report, also highlights the popularity of Republic of Ireland TV channels in Northern Ireland. One in four people watch RTE channels (One and Two) every week, with smaller but still significant numbers watching TG4 and TV3. These services, with the exception of TV3, became more widely available in Northern Ireland after digital switchover in October 2012.

In radio, our research shows that listeners value local content, with a far bigger share tuning into local commercial and BBC stations than in other nations.

While the report generally paints a picture of Northern Ireland catching up – and in some cases overtaking – other UK nations, there are some exceptions. Digital radio ownership is lowest in Northern Ireland, at just 24% of households, compared to the UK average (41%). Our research also shows that mobile users in Northern Ireland are more likely to experience problems with reception than users in other UK nations.

Finally, the report highlights upcoming developments that are set to improve broadband, mobile phone, and digital radio services in Northern Ireland over the next 12 months.

Contents

Key trends for Northern Ireland

Northern Ireland leads take-up of tablets…rising three-fold over the past twelve months to nearly three in ten (29%) – the highest across all nations and higher than the UK average (24%). Take-up was particularly marked in urban areas and homes with children. Tablet owners were 50% more likely to choose their tablet as their most important device for accessing the internet (12% vs. 8% UK average).

...but rural areas still lag behind for 3G, with lower use of smartphones (35% vs. 51%) and monthly contracts (50% vs. 60%) and consequently fewer using mobile internet (35%).

Greatest concern with mobile reception noted in Northern Ireland… three-quarters of mobile customers experienced problems, driven by being unable to get a signal at all (59%). Attitudes may have been heightened by the stronger attachment to mobile use in Northern Ireland, with 28% saying this would be their most missed activity – highest of all nations.

…and rising dissatisfaction with service reliability. In Northern Ireland the importance of making mobile voice calls at home is higher than in other nations, but so too is dissatisfaction with the ability to do so. And mobile customers are increasingly dissatisfied with their reception in general – satisfaction levels falling by five percentage points to 83%.

Availability of fibre broadband in NI is the highest across the UK… with 93% of premises in postcodes served by BT Openreach's fibre network in June 2013. Take-up of broadband rose 5 percentage points over the past year, driven by rising ownership in rural areas which is now equal to the UK average (75%).

…but consumers appear to prefer more traditional communications. Use of mobiles is concentrated around voice and text, despite the rising use of smartphones in urban areas. There is greater use of post to pay bills (39% vs. 29% average) and lower use of online banking/bill payment (27% vs. 39% average). Also, a greater preference for face-to-face communications for transactions with government services, which might partly explain the...

… lower use of online government services, despite positive experience among users. Around half of the online population in Northern Ireland say they use online government services: completing tax returns, applying for benefits, or completing the Census, which is the lowest across the devolved nations and lower than the UK average (61%). But the experience of users is positive, most agreeing that these services "are more convenient" (89%), "save time" (85%) and they "prefer this method of access" (81%) – some of the highest scores across the UK.

Indications of more cautious behaviour while online. Higher than average proportions (39% vs. 25% average) shop online only from known websites, and fewer say they are happy entering personal details.

Setting the scene

Key facts about Northern Ireland

Figure	Northern Ireland	UK
Population	1.810m (2011 census)	63.232m (mid-2011 estimate)
Age profile	Population aged <16: 20.9% Population aged 65+:14.6%	Population aged <16: 18.2% Population aged 65+:16.1%
Population density	131 people per square kilometre	260 people per square kilometre
Language	10.7% have some ability in Irish; 8.1% have some ability in Ulster-Scots	n/a
Unemployment	7.6% of the working age population	7.8% of the working age population
Income and expenditure	Weekly household income: £593 Weekly household expenditure: £489	Weekly household income: £699 Weekly household expenditure: £471

Source: Office for National Statistics: Region and Country Profiles, Key Statistics – March 2013; Office for National Statistics: Family Spending 2012 edition; Northern Ireland Statistics and Research Agency, Census 2011 - Key Statistics for Northern Ireland

A note on our Technology Tracker survey research

We conducted a face-to-face survey of 3,750 respondents aged 16+ in the UK, with 507 interviews conducted in Northern Ireland. Quotas were set and weighting applied to ensure that the sample was representative of the population of Northern Ireland in terms of age, gender, socio-economic group and geographic location. Fieldwork took place in January and February 2013.

Respondents were defined as urban if they lived in a settlement with a population of 2000 or more and rural if they lived in areas with smaller populations. The survey sample in Northern Ireland has error margins of approximately +/- 3-4% at the 95% confidence level. In urban and rural areas; survey error margins are approximately +/-4-6%.

In addition to the survey data, this report refers to information from a range of other sources, including data provided to Ofcom by stakeholders. Tables summarising the data collected in our survey are published on Ofcom's website.

We publish this report to support Ofcom's regulatory goal to research markets constantly and to remain at the forefront of technological understanding. It also fulfils the requirements on Ofcom under Section 358 of the Communications Act 2003 (the Act) to publish an annual factual and statistical report, and addresses the requirement to undertake and make public our consumer research (as set out in Sections 14 and 15 of the Act).

The information set out in this report does not represent any proposal or conclusion by Ofcom in respect of the current or future definition of markets. Nor does it represent any proposal or conclusion about the assessment of significant market power for the purpose of the Communications Act 2003, the Competition Act 1998 or any other relevant legislation.

1 Northern Ireland’s communications market

1.1 Key findings for Northern Ireland

Introduction

This section sets out a selection of the key facts and figures relating to communications markets across Northern Ireland, comparing and contrasting between nations and highlighting changes that have taken place in the past year.

Key findings for Northern Ireland

<u>Use of online services</u>

- **In Northern Ireland, around half of those with internet access use online government services** e.g. completing tax returns, applying for benefits, completing the Census, applying for a passport, contacting an MP or local council etc. This is lower than the UK average, where six in ten of the online population use these services.

- **Fewer internet users in Northern Ireland use government services than in England and Wales**. However, among users of the services opinions are positive; e.g. over eight in ten of those who use government services online said that they are more convenient (89%),slightly higher than the UK average. Users also said the services save time (85%) and they prefer to access these services online (81%).

- **Sixty per cent of internet users in Northern Ireland say they shop online nowadays** and around three-quarters (74%) of online shoppers in Northern Ireland said they felt secure when paying online, on par with the UK average.

- **Around three-quarters (79%) of online shoppers in Northern Ireland are confident that goods bought online will be delivered on time and in good condition**, in line with the UK average**.**

- **Among people who had made purchases online, around half (54%) said that a concern about delivery had previously prevented them buying online**. In particular, they mentioned concerns about high costs of delivery (32%) and delivery not being available in their area (24%). Online shoppers in Northern Ireland reported a higher level of concerns than those in other nations and the average for the UK as a whole.

<u>‘Not-spots’ – users’ experience of mobile phone quality of service</u>

- **Mobile users in NI are more likely to be dissatisfied and more likely to experience problems with mobile coverage than consumers in the other UK nations** – 75% of respondents in NI had experienced a problem, compared to the UK average of 52%.

- **Users in Northern Ireland are significantly more likely than users in other nations to be less satisfied than they were 12 months ago.**

TV and audio-visual content

- **With digital switchover complete, a third of homes in Northern Ireland now have Freeview as their main TV platform.** The proportion of homes with Freeview as their main TV viewing platform has increased from 26% to 32% over the past year.

- **Northern Ireland continues to lead the UK in take-up of pay-TV platforms.** Two-thirds (66%) of TV homes claim to have pay-TV services, higher than the UK average of 59%.

- **Year-on-year figures show a 10% decline in spend on first-run originated content production for Northern Ireland, the largest relative decrease across the nations over this period.** By comparison, the UK figure was down 4% year on year.

- **Northern Ireland total spend on current affairs is up 5% on the year – the only increase across the four nations for current affairs.**

- **First-run networked programmes produced in Northern Ireland have increased marginally, with the percentage of programmes produced rising to 0.9% between 2011 and 2012.**

- **Two and a half million pounds are spent annually on Irish language content.** In the past financial year there were 17 recipients of funding for Irish language content.

Radio and audio content

- **The reach of radio in Northern Ireland is lower than the UK average.** Among adults in Northern Ireland, radio services reached 87.1% of the adult population, 2.4 percentage points lower than the UK average of 89.5%.

- **Local/nations stations are more popular in Northern Ireland than in other UK nations.** Local commercial stations account for the largest share of listening in Northern Ireland, with over a third (36%) of all listening going to these stations.

- **Northern Ireland analogue radio listening remains high.** In 2012, listening to radio via the analogue FM and AM wavebands was higher in Northern Ireland (72%) than the UK average (62%).

Internet and web-based content

- **Eight in ten homes in Northern Ireland are internet connected.** Internet access via broadband, mobile phone or narrowband rose by seven percentage points to 80% in the year to Q1 2013, to meet the UK average.

- **Three in ten households in Northern Ireland have a tablet computer**. Tablet take-up in Northern Ireland (29%) is highest among the devolved nations and five percentage points greater than the UK average. Furthermore, consumers in Northern Ireland are 50% more likely than the UK average to choose their tablet as their most important device for accessing the internet.

- **Forty-five per cent of all adults in Northern Ireland owned a smartphone in Q1 2013** (equivalent to 48% of mobile phone users). While this was below the UK average of 51%, it represented a significant increase from the previous year's figure of 34%.

- **Internet users in Northern Ireland claim to spend significantly less time online than the UK average.** According to research conducted for *Ofcom's Adult Media Literacy Report*, internet users in Northern Ireland claim to spend almost 12 hours on the internet per week, significantly less than the UK average of 16.8 hours.

Telecoms and networks

- **Northern Ireland had the highest availability of fibre broadband among the UK nations in June 2013**. In Northern Ireland, 93% of premises were in postcodes served by BT Openreach's fibre networks in June 2013, the highest proportion among the UK nations and significantly higher than the UK average of 56%.

- **Half of all consumers in urban Northern Ireland use their phone to access the internet.** The proportion of adults in Northern Ireland who accessed the internet on their mobile phone increased by ten percentage points to 45% in the year to Q1 2013. There was a notable increase in mobile internet use in urban areas of Northern Ireland, where 51% of adults used their phone to access the internet in Q1 2013 (the proportion of adults in rural Northern Ireland who accessed the internet using a mobile phone was lower, at 35%).

- **Satisfaction with mobile phone reception declined in Northern Ireland in the year to Q1 2013:** Eighty-three per cent of mobile users in Northern Ireland said they were 'very' or 'fairly' satisfied with their ability to access their mobile network in Q1 2013, down from 88% in Q1 2012. Levels of satisfaction were slightly higher in urban areas (85%) than in rural (78%) areas: probably because coverage is better in urban areas.

- **Nearly nine in ten fixed broadband users in Northern Ireland are satisfied with their service:** Overall satisfaction with fixed broadband services and with fixed broadband speeds remained relatively stable in Northern Ireland in the year to Q1 2013, at 87% and 78% respectively. Fewer consumers in Northern Ireland were 'very' satisfied with their fixed broadband speeds in Q1 2013 (at 35%) than in Q1 2012 (44%).

Post

- **One in four people (25%) in Northern Ireland had not sent any items by post in the past month,** when asked throughout 2012, although households in Northern Ireland claim to send an average 6.6 items of post per month.

- **The majority of people in Northern Ireland use First Class postage when sending items,** with 61% using it most or all of the time. Over half (56%) of people living in Northern Ireland think the Royal Mail's First Class service for posting standard letters is good value for money, compared to 49% across the UK as a whole.

- **Nine in ten people in Northern Ireland are satisfied with Royal Mail.** This is primarily driven by satisfaction with delivery times such as the time of day post is delivered (80% v 71% across the UK) and the reliability of delivery time (85% v 89%).

Figure 1.1 Fast facts for Northern Ireland

	UK	England	Scotland	Wales	Northern Ireland	UK urban	UK rural	NI urban	NI rural
TV take-up	97	97	97	98	98	97	98	98	97
Smart TV take-up among TV homes	7	8	4$^-$	6	6	7	7	7	3$^-$
DAB ownership amongst radio listeners	41 ↑+3	43 ↑+3	29$^-$	27$^-$	24$^-$	41	39	23$^-$	26$^-$
Catch-up TV viewing (on mobile or computer)*	27	28	18$^-$	25	24	27	28	25	22
Broadband take-up	75	76	70$^-$	66$^-$	74 ↑+5	74	82$^+$ ↑+5	73	75 ↑+6
Mobile broadband take-up	5	5	7	7	5	6	4	5	5
Use mobile to access internet	49 ↑+10	49 ↑+9	44$^-$ ↑+13	47 ↑+8	45 ↑+10	49 ↑+10	48 ↑+13	51 ↑+15	35$^-$
Mobile phone take-up	92	92	92 ↑+7	92	94	92	93	95	91
Smartphone take-up	51 ↑+12	52 ↑+12	45$^-$ ↑+13	49 ↑+10	45$^-$ ↑+11	51 ↑+12	51 ↑+14	51 ↑+15	35$^-$
Fixed landline take-up	84	85	83	76$^-$	82	83	91$^+$	78$^-$	89$^+$
Tablet computer take-up	24 ↑+13	24 ↑+13	24 ↑+13	21 ↑+13	29$^+$ ↑+20	23 ↑+12	29$^+$ ↑+18	34$^+$ ↑+23	19$^-$ ↑+13
E-reader take-up (personal use)	16 ↑+6	17 ↑+7	14 ↑+6	15	12$^-$ ↑+4	15 ↑+4	21$^+$ ↑+6	14	9$^-$
Households taking bundles	60 ↑+3	60	60 ↑+13	50$^-$	57 ↑+6	59	64 ↑+8	60 ↑+7	52$^-$
Fixed telephony availability	100	100	100	100	100				
Fixed broadband availability[1]	99.98	100	99.86	100	100				
LLU ADSL broadband availability[2]	94 ↑+2	95 ↑+2	87 ↑+3	93 ↑+5	85 ↑+6				
Virgin Media cable broadband availability[3]	48	51	38	22	28				
BT Openreach / Kcom fibre broadband availability[4]	56	59	25	41	93				
NGA broadband availability[5]	73 ↑+8	76 ↑+8	52 ↑+7	48 ↑+11	95				
2G mobile availability[6]	99.6	99.8	99.3	98.8	98.5				
3G mobile availability[7]	99.1	99.5	96.6	97.7	97.4				
DTT availability[8]	98.5	98.6	98.7	97.8	97.4				
TV consumption (hours per day)	4.0	4.0	4.3	4.5	4.1				
Radio consumption (hours per day)	3.2	3.2	3.1	3.3	3.1				

Key: $^+$Figure is significantly higher than UK average; $^-$Figure is significantly lower than UK average;
↑+xx Figures have risen significantly by xx percentage points since Q1 2012

**Catch-up TV – due to wording change in 2013 questionnaire, data are not directly comparable to previous years*
Source: Ofcom research Q1 2013, BARB, RAJAR, industry data
Base: All adults aged 16+ (n = 3750 UK, 2250 England, 501 Scotland, 492 Wales, 507 Northern Ireland, 1962 England urban, 288 England rural, 250 Scotland urban, 251 Scotland rural, 247 Wales urban, 245 Wales rural, 254 Northern Ireland urban, 253 Northern Ireland rural)
1. Proportion of premises able to receive ADSL broadband services based on data reported by BT
2. Proportion of homes connected to an LLU-enabled BT local exchange area, December 2012
3. Proportion of homes in postcodes served by Virgin Media's cable broadband network, June 2013
4. Proportion of homes in postcodes served by BT Openreach/ KCom's fibre broadband networks, June 2013
5. Proportion of homes in postcodes served by NGA networks, June 2013
6. Proportion of premises that have outdoor 2G mobile coverage from at least one operator, June 2013
7. Proportion of premises that have outdoor 3G mobile coverage from at least one operator
8. Estimated proportion of homes that can receive the PSB channels via DTT (3PSB Mux coverage). Joint TV planning project (Arqiva, BBC, Ofcom)

1.2 Use of internet services: e-government and e-commerce

Introduction

With more opportunities to carry out activities online that were once carried out only in person or through the postal service, we decided to focus this section of the report on the use of government services online ('e-government') and consumers' use of the internet to make purchases ('e-commerce').

This section reports several pieces of relevant research, including Ofcom's ongoing Technology Tracker survey research (see *Setting the scene* for more details) and Ofcom's Media Literacy tracker, which measures media literacy across the devolved nations of the UK among adults aged 16 and over[1]. But much of the data comes from a bespoke piece of research on the use of, and attitudes towards, the internet for e-government and e-commerce, conducted in March 2013[2]. We comment only on those differences that are statistically significant.

In Northern Ireland, around half of those with internet access have used online government services; a lower proportion than in England and Wales

Among those with internet access in Northern Ireland, 48% claimed to have used a government service online, e.g. completing a tax return, applying for benefits, completing the Census, applying for a passport, etc (see Figure 1.2)[3]. The proportion of those with internet access who said they had used online government services in Northern Ireland is lower than in England and Wales. It does not significantly differ between those living in urban (53%) and

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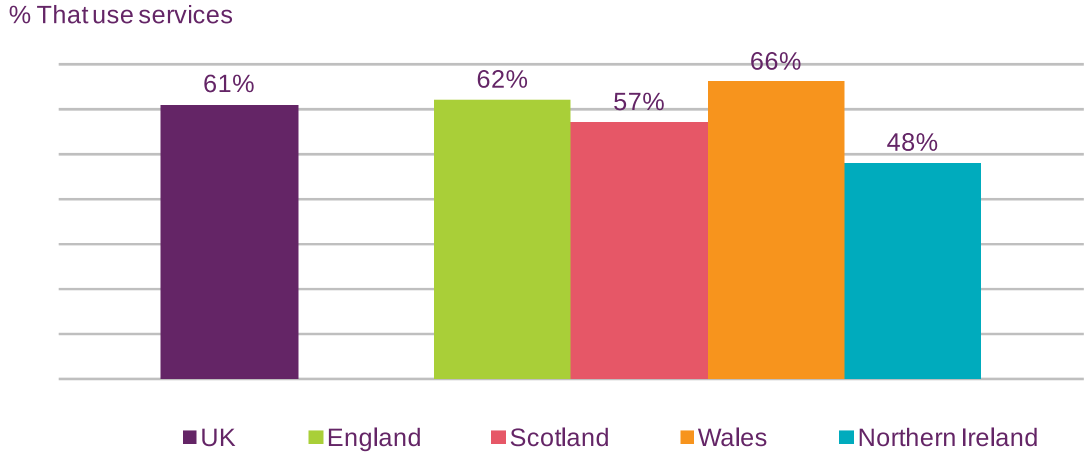
[1] The dataset reported here comprises results from fieldwork conducted by Saville Rossiter-Base in autumn 2012 among 236 adults in Scotland, 231 adults in Wales, and 213 adults in Northern Ireland.
[2] The research involved 2971 UK adults, including 311 in Northern Ireland, in the face-to-face survey of UK residential consumers conducted in March 2013 by Kantar Media,
[33] Ofcom has collected data looking at similar areas in both the Technology Tracker and the Media Literacy research. The data reported here focuses on use of government services online and provides the respondent with 11 examples e.g. applying for a school place, completing the Census or applying for benefits. The Technology Tracker figures reported within this report in the Internet and web-based content section focus more simply on 'using local council/government websites'. The Media Literacy research looks at finding information separately to completing transactions online through council/government websites. The differences in the question wording and also methodology result in a range of figures in this area.

rural areas (42%). Those in social groups ABC1 were more likely to say they had used online government services (57%) than those in groups C2DE (34%).

Figure 1.2 Proportion 'ever' using online government services, by nation



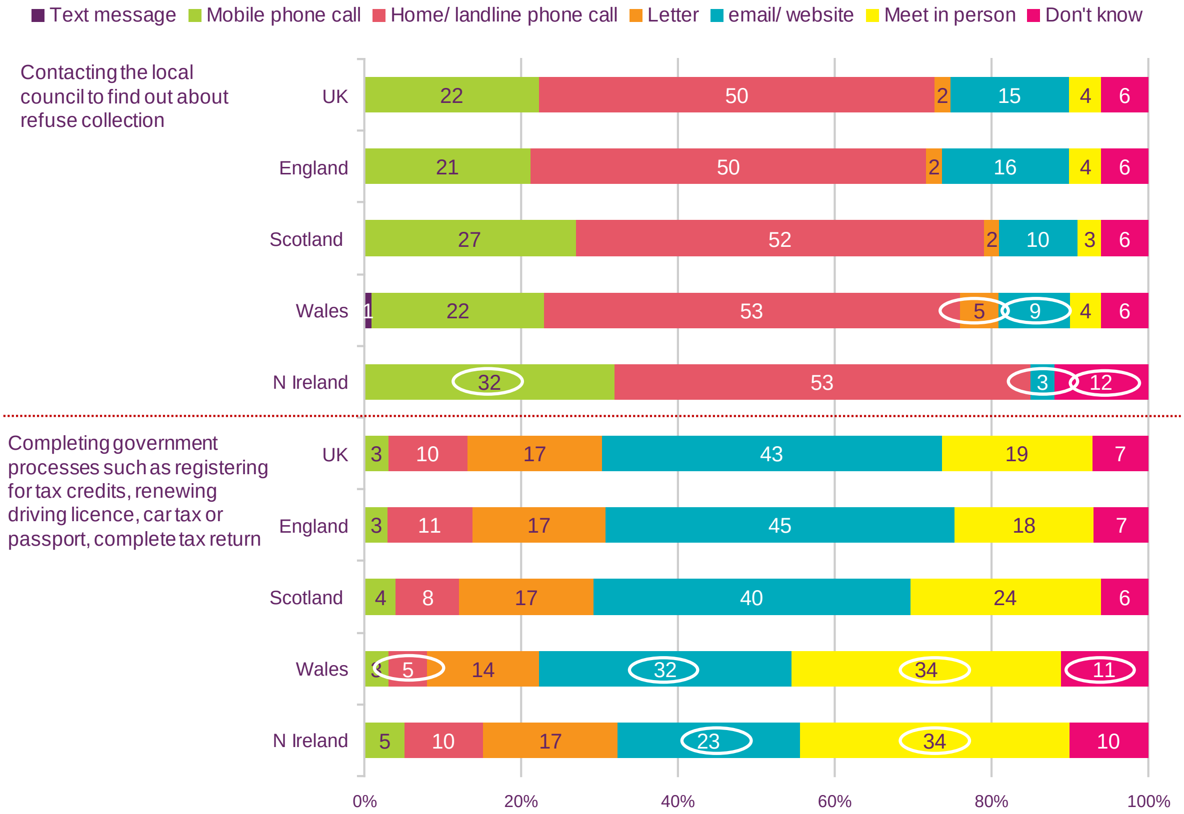
Source: Kantar Media Omnibus. Base: All with internet access. Internet access could be inside or outside the home, and be on a variety of devices. UK (2271) England (1325) Scotland (399) Wales (297) Northern Ireland (250). Question: Q.8 Nowadays, many government services are available online. Some examples of these services include <Examples> Do you ever use government online services?

In Northern Ireland, around a quarter of adults said their preferred method for completing government processes was through a website or email

Ofcom's Media Literacy study identifies preferences for different e-government services. Across all nations, relatively few adults said their preferred method of contact with their local council (e.g. about refuse collection) was through a website or by email (see Figure 1.3). The majority of adults said they preferred to contact their local council about this type of issue by either a mobile or landline telephone call.

But when asked about their preferred method of contact for completing tasks such as renewing a driving licence or passport, they were more likely to prefer to use a website or email. In Northern Ireland, 23% of adults said their preferred method for completing government processes was via a website. The most preferred method of contact for these services was to meet in person, with 34% saying this.

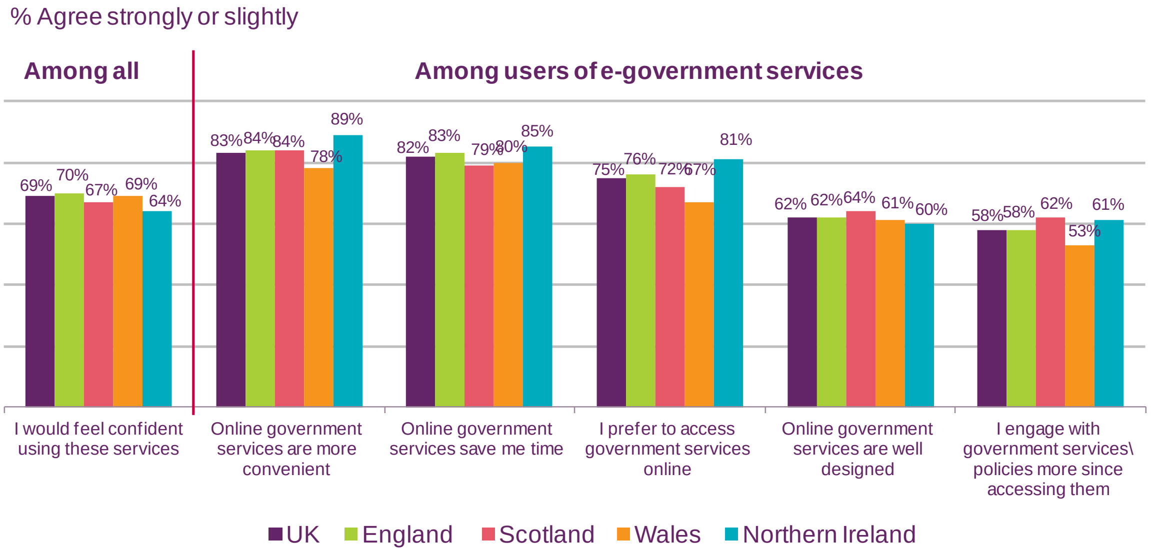
Figure 1.3 Preferred method of contact with local council, and for government processes, by nation



Source: Ofcom research, fieldwork carried out by Saville Rossiter-Base in September to November 2012. Base: All adults aged 16+ (1805 UK, 1125 England, 236 Scotland, 231 Wales, 213 Northern Ireland). Significance testing shows any difference between any nation and the UK. NZ2A-E. Please use this list to say which one way you would prefer to make contact for a few different reasons that I'll read out. (Prompted responses, single coded)

In Northern Ireland, 64% of all adults with internet access said they would feel confident using government services online (see Figure 1.4). Over eight in ten of those who used government services online said that they were more convenient (89%), saved time (85%) and they preferred to access these services online (81%). Sixty-one per cent of users of the online services said they had engaged with government services or policies more since accessing them online. Attitudes towards using government services online are similar across the nations.

Figure 1.4 Attitude towards online government services, by nation

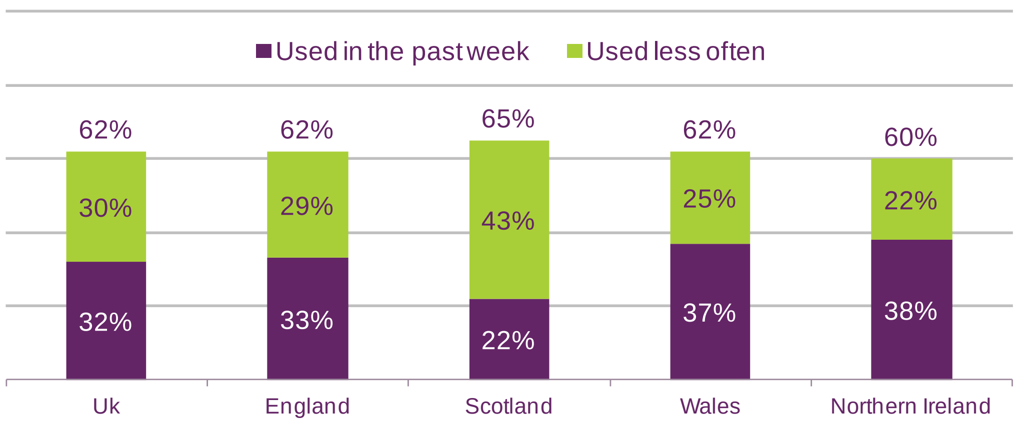


Source: Kantar Media Omnibus. Base: All with internet access: UK (2271), England (1325), Scotland (399), Wales (297), Northern Ireland (250). All ever used e-government services: the UK (1294), England (779), Scotland (217), Wales (187), Northern Ireland (109).Question: Q.9 Thinking about the kinds of services I have just shown you please tell me to what extent you agree or disagree with each of the following statements.

Three in five adults in Northern Ireland say they shop online

In Northern Ireland, 60% of internet users claimed to shop online for goods, services, tickets etc.; this is a similar proportion as claimed in the rest of the UK (see Figure 1.5). Whether or not people said they shopped online at all does not differ significantly among those living in urban (61%) and rural areas (60%) within Northern Ireland. Those in social groups ABC1 (74%) were more likely to shop online than those in C2DE (44%).

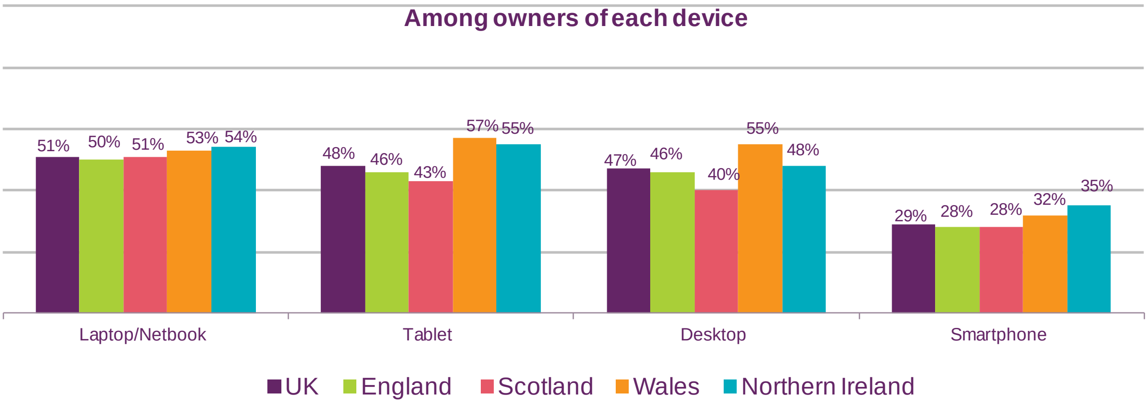
Figure 1.5 Proportion of internet users shopping online, by nation



Source: Ofcom Technology Tracker research, Q1 2013.Base: Adults aged 16+ who use the internet at home or elsewhere 2013. % purchasing good/services/tickets etc online. (UK= 2918, England=1787, Scotland=394,Wales=361, Northern Ireland=376). QE5. Which, if any, of these do you use the internet for? Note figures in the chart below are not directly comparable to figures on internet from previous years due to changes in question wording.

Figure 1.6 shows the proportion of those shopping online through devices that may be able to access the internet. In Northern Ireland, 55% of those with a tablet shop online using their tablet, 54% of those with a laptop or netbook shop online using this, 48% of those with a desktop computer shop using this, and 35% of smartphone owners shop using their smartphone.

Figure 1.6 Proportion of people shopping online through devices, by nation



Source: Kantar Media Omnibus Base: All who have each device. Desktop: UK (913) England (567) Scotland (133) Wales (119) NI (94). Laptop/netbook: UK (1647) England (951) Scotland (303) Wales (211) NI (182). Tablet: UK (608) England (334) Scotland (113) Wales (79) NI (82). Smartphone: UK (1230) England (715) Scotland (213) Wales (157) NI (145). Bases are 75+ respondents. Question: Q.1A Which of these activities do you use your device for nowadays?

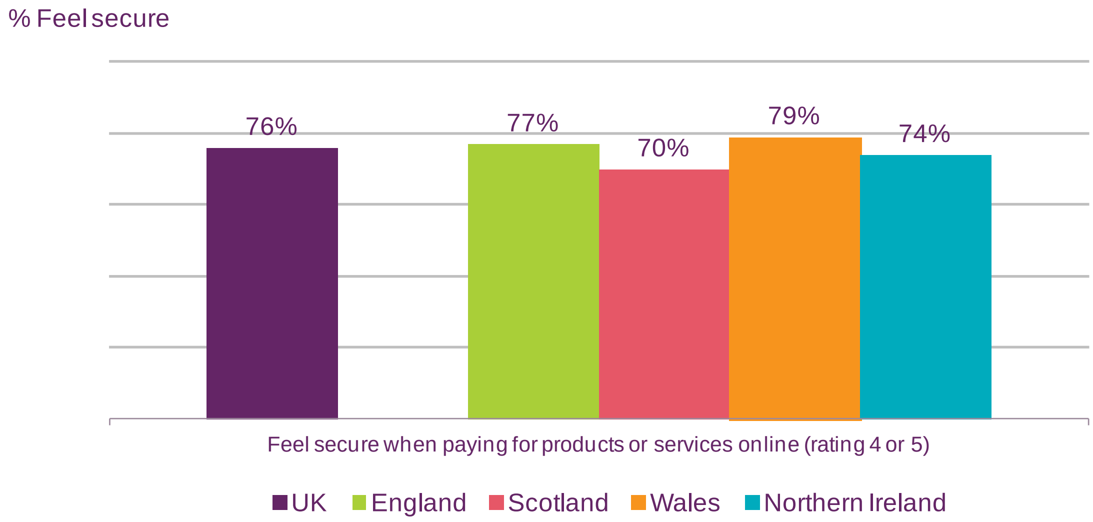
The items that internet shoppers in Northern Ireland had bought online most often in the past six months were: clothing or footwear (75%), hotel or holiday bookings (54%), transport e.g. train or plane tickets (47%), physical multimedia products e.g. books, CDs, DVDs (42%), electrical devices e.g. TVs (37%), cinema or theatre tickets (35%), car/home/travel insurance (33%), digital multimedia e.g. music or e-books (33%) and groceries or take-aways (29%).

When asked about their preferred method of contact for booking a holiday (e.g. mobile phone, landline phone, in person, email/website etc), adults across all the nations were most likely to say that they would prefer contact via a website or email, or would like to meet in person. In Northern Ireland, 44% said they would prefer contact via a website or email, and around one-third (36%) preferred to meet in person.

Around three-quarters of online shoppers in Northern Ireland feel secure when making online payments

In general, across the nations, around three-quarters of those shopping online feel secure when they are paying for products and services online (see Figure 1.7). Similarly, 74% of online shoppers in Northern Ireland said they felt secure when paying online.

Figure 1.7 Perceptions of security when shopping online, by nation



Source: Kantar Media Omnibus. Base: All who use online shopping in the UK (1221), England (689) Scotland (211) Wales (179) Northern Ireland (142). Question: Q.11A Generally, when ordering online how secure do you feel when paying for products or services online? Using a scale form 1-5, where 1 means not at all secure and 5 means very secure.

Online shoppers in Northern Ireland claim that their decisions about which website to buy from are influenced by several main factors: that the site is well known or a reputable brand (62%), the security of the site, e.g. secure payment options (52%), recommendations from friend, family and colleagues (48%), the website offering the product or service at the lowest price (41%), and the delivery options (30%). Although the frequency of mentions of these factors differ slightly across the nations, the most important five factors are constant across all nations of the UK.

When online shoppers were asked how they decided which websites they would be happy to buy from, 39% of online shoppers in Northern Ireland said they would buy only from websites they had previously bought from (see Figure 1.8). Fifty-six per cent said they would tend to buy something from a website they had not used before, once they had made checks on the site. The remaining 5% said they would buy from a website they had not used before (without necessarily making any checks on it). Online shoppers in Northern Ireland and Wales were more likely than those in the UK overall to say they would buy only through websites they had bought from in the past, suggesting they are more cautious about using websites that are new to them.

Figure 1.8 Online shoppers' choice of websites for shopping, by nation

Source: Ofcom research, fieldwork carried out by Saville Rossiter-Base in September to November 2012. Base: All who say they shop online (1076 UK, 667 England, 151 Scotland, 139 Wales, 119 Northern Ireland) Significance testing shows any difference between any nation and the UK. IN33E– When you want to buy something online, which of the following statements most closely applies? (Prompted responses, single coded)

General views on the postal service are included elsewhere in the report, but here we report on online shoppers' opinions on the delivery of goods purchased online. This is included because the delivery of goods is part of the overall online shopping experience.

Around three-quarters of online shoppers in Northern Ireland are confident that goods bought online will be delivered on time and in good condition

Among those who shop online, confidence levels were similar across the nations that the goods would arrive on time and be in good condition. In Northern Ireland, 79% of online shoppers were confident about the delivery of goods bought online (see Figure 1.9).

Figure 1.9 Confidence in delivery when shopping online, by nation

Source: Kantar Media Omnibus. Base: All who use online shopping in the UK (1221), England (689) Scotland (211) Wales (179) Northern Ireland (142). Q.11B Generally, when ordering online how confident are you that the goods will arrive on time and in good condition? Using a scale form 1-5, where 1 means not at all confident and 5 means very confident.

Around nine in ten (89%) online shoppers in Northern Ireland said they usually had their online purchases delivered to their home address, rather than to a work address, friends or family or to a store.

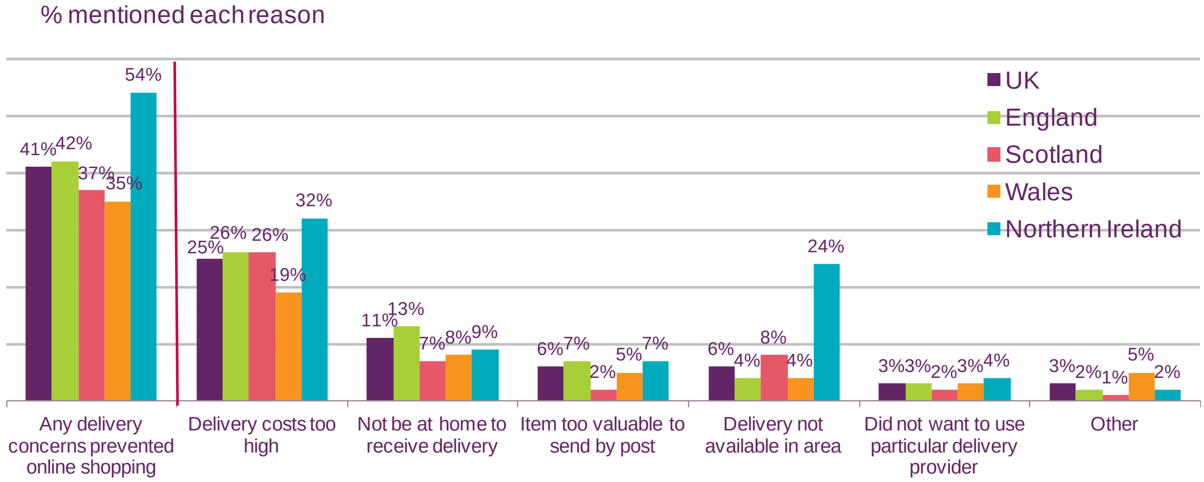
Online shoppers in Northern Ireland claimed that the factors which influenced their decision about which delivery method to use were: the price (free delivery 58% and cheapest delivery 50%), speed of delivery (44%), and the availability of order tracking (29%). Although the proportions of online shoppers who mention individual factors differ slightly by nation, the four most important factors are constant across all the nations of the UK. These findings are consistent with Ofcom's *Review of Postal Users' Needs* studies, which highlighted eight 'user needs' including; 'cost', 'speed' and 'control'.[4]

Online shoppers in Northern Ireland have greater concerns over delivery than shoppers in other nations, related to high costs and availability in their area

Even among those who said they now made purchases online, around half (54%) said that delivery concerns had previously prevented them buying online (see Figure 1.10). Online shoppers in Northern Ireland reported more concerns than those in other nations. In particular, they mentioned concerns about high costs of delivery (32%) and delivery not being available in their area (24%).

[4] Ofcom, *Review of postal users' needs*, 16 October 2012, http://stakeholders.ofcom.org.uk/consultations/review-of-user-needs/

Figure 1.10 Delivery concerns preventing online purchasing, by nation



Source: Kantar Media Omnibus. Base: All who use online shopping in the UK (1221), England (689) Scotland (211) Wales (179) Northern Ireland (142). Question: Q.14 Have delivery concerns ever prevented you from buying items online? If yes, which of the following reasons prevented you from shopping?

1.3 'Not-spots' - Users' experience of mobile phone quality of service

Introduction

Ofcom is undertaking a programme of work to bring about improvements in mobile phone coverage (whether it is possible to receive a mobile signal or not) and mobile phone reception (where although a signal may be present it is not possible to connect or sustain a call or use data services).

As part of this work we commissioned research to understand the consumer experience. This research will help us understand the extent to which mobile phone reception issues affect consumers, and what types of problem are most prevalent and cause most concern.

We considered the specific issues:

- Being unable to make/connect a call (including if the phone shows 'bars' present)
- Poor sound quality / call breaks up
- Calls ending unexpectedly – not while travelling (when stationary or walking around)
- Calls ending unexpectedly – while travelling e.g. by road/rail
- Being unable to send a text message
- Text message does not arrive or arrives late
- Being unable to access or sustain access to mobile internet
- Being unable to send emails

The research also sought to understand the effect of location on the consumer experience of using mobile phones, including indoor and outdoor locations and while travelling.

The fieldwork was conducted in two waves using a face-to-face omnibus survey in November 2012. The total sample comprised 2,136 adults aged 16 and over. The research was conducted among a representative sample of UK consumers, and we also captured the experiences of specific sub-groups:

- the populations within each of the four nations
- those in urban and rural areas
- small business consumers (defined as those working within a business employing between one and ten employees)
- regular rail users
- regular road users

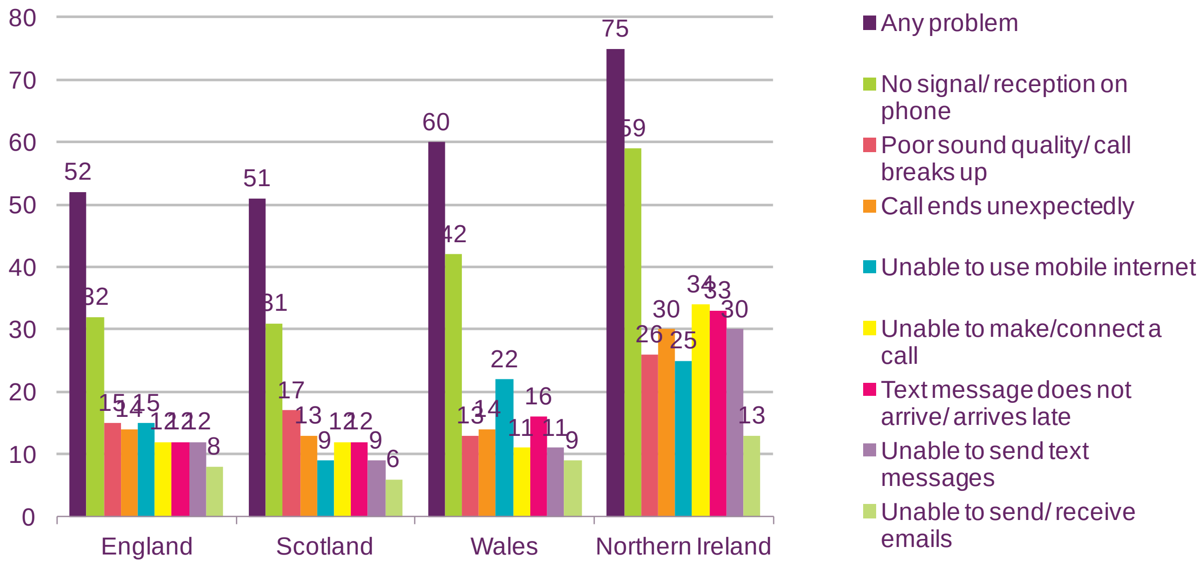
The research identified that a significant proportion of consumers were dissatisfied with certain aspects of their mobile service.

Consumers in Northern Ireland are more likely to experience problems with reception than consumers in the other nations in the UK

Mobile users in NI are more likely to be dissatisfied and more likely to say they experience problems with mobile coverage than consumers in the other UK nations – 75% of respondents in NI had experienced a problem, compared to the UK average of 52%.

Not getting a signal is the problem experienced by most respondents (59%), followed by being unable to make or connect a call (34%), text messages arriving late or not at all (33%) and unable to send text messages (30%). Around a third of users in Northern Ireland have experienced four or more problems.

Figure 1.11 Mobile phone users who have ever experienced problems with reception



Source: Kantar Media omnibus, (14th – 20th November 2012)
Base: All who use a mobile phone (N=1743/195/95/103)
Q13: Thinking about your mobile reception with ... in the UK, do you ever experience any of the following issues?

Northern Ireland users value the ability to make calls on their mobile phones at home and outdoors in rural areas

Figure 1.12 shows the overall figures for importance of, and satisfaction with the ability to make, calls in different locations, by nation.

As with the UK average, the largest gap between importance and satisfaction in each of the nations is for the ability to make calls outdoors in rural locations. In Northern Ireland it is just as important for consumers to be able to use a mobile phone at home as in places they regularly go to outdoors. Furthermore, the ability to make calls on their mobile phones at home is significantly more important to users in Northern Ireland than to those anywhere else in the UK. Ninety-two per cent of users reported that this is either important, or very important, compared to 82% in England, 83% in Wales and 86% in Scotland. Making calls outdoors in rural locations is also significantly more important to mobile users in Northern Ireland compared to the other nations in the UK (93% v 79% in England, 84% in Scotland and 87% in Wales).

Users in Wales and Northern Ireland are significantly more likely than users in England or Scotland to say that being able to make a call outdoors in places they go to regularly is important (96% and 94% vs. 86% and 90%).

Figure 1.12 Net importance of / satisfaction with the ability to make calls

		Indoor			Outdoor		
		Home	Work / place of study	General	Places go to regularly	Rural	Urban
UK	Importance	83	70	82	87	80	84
	Satisfaction	76	66	75	78	67	78
	S-I	-7	-4	-7	-9	-13	-6
England	Importance	82	70	81	86	79	83
	Satisfaction	76	66	74	78	67	77
	S-I	-6	-4	-7	-8	-12	-6
Scotland	Importance	86	71	89	90	84	88
	Satisfaction	80	66	80	82	71	80
	S-I	-6	-5	-19	-8	-13	-8
Wales	Importance	83	73	85	96	87	90
	Satisfaction	77	68	75	84	62	77
	S-I	-6	-5	-10	-12	-25	-13
Northern Ireland	Importance	92	76	91	94	93	90
	Satisfaction	72	58	77	76	70	80
	S-I	-20	-18	-14	-18	-23	-10

Source: Kantar Media omnibus, (14th – 20th November 2012)
Base: All who use a mobile phone (N=2136/1743/195/95/103)
Q17: How important is it for you to be able to make calls in the following locations?
Q18: How satisfied do you feel with the ability to make calls in each of these locations?
Net figures shown for very important/somewhat important and very satisfied/somewhat satisfied

Satisfaction with ability to make/receive calls falls most in Northern Ireland

When consumers were asked if they were more or less satisfied with their ability to make calls in a range of locations than they were 12 months ago, a similar proportion in each of the nations reported being more satisfied. But users in Northern Ireland were significantly more likely than users in other nations to be less satisfied than they were 12 months ago.

As shown in Figure 1.13 below, users in Northern Ireland are:

- Significantly more likely than users in England to be less satisfied with their ability to make calls indoors at home (15% vs. 7%).
- Significantly more likely than users in England and Scotland to be less satisfied with their ability to make calls indoors at their workplace or place of study (11% vs. 4% and 2%).
- Significantly more likely than users in England, Scotland and Wales to be less satisfied with their ability to make calls indoors in general, to make calls outdoors in places they go to regularly and to make calls outdoors in urban areas.

Figure 1.13 Change in levels of satisfaction with ability to make calls in different locations compared to 12 months ago

Source: Kantar Media omnibus, (14th – 20th November 2012)
Base: All who use a mobile phone (N=2136/1743/195/95/103/1757/379)
Q.10 And which is the ... important to you when thinking about your mobile operator? Most important.

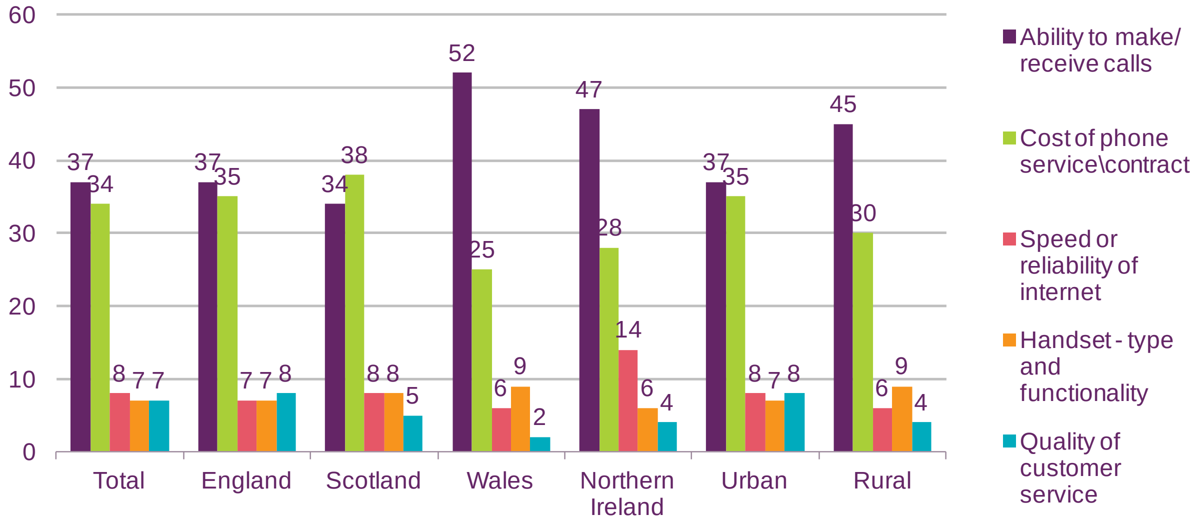
The ability to make or receive calls or texts is particularly important when choosing a provider, for people living in Northern Ireland and Wales

For consumers in each of the four nations, the ability to make or receive voice calls or text messages is one of the top two most important factors in choosing their mobile provider. In Northern Ireland and Wales, this factor is considerably more important than other features, including price.

Although less important than being able to make or receive calls or texts, or than cost, the speed or reliability of internet access offered by a mobile provider is significantly more important for users in Northern Ireland than for the overall population (14% vs. 8%).

Users living in rural areas are significantly more likely than those living in urban areas to rate the ability to make or receive calls as most important, when thinking about their mobile provider (45% v. 37%).

Figure 1.14 Most important factor, when choosing mobile provider



Source: Kantar Media omnibus, (14th – 20th November 2012)
Base: All who use a mobile phone (N=2136/1743/195/95/103/1757/379)
Q.10 And which is the ... important to you when thinking about your mobile operator? Most important.

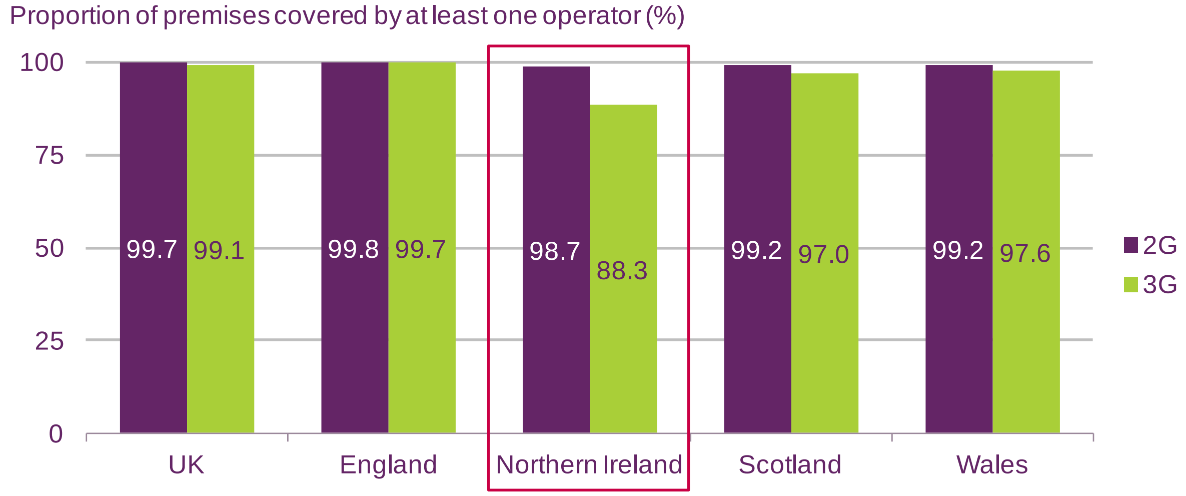
3G mobile coverage in Northern Ireland is the lowest in the UK, but there are plans for improvement

As Figure 1.15 shows, 3G mobile coverage in Northern Ireland is the lowest in the UK, with coverage by at least one operator reaching 88.3% of premises in the nation, compared to 97.0% in Scotland and 97.6% in Wales. In rural areas, this falls to 78.5% of premises compared to the UK average of 96.6%.

There are plans to improve 3G coverage in Northern Ireland. Everything Everywhere and Three expect to have completed improvements to their shared network by the end of 2013, which will see 3G population coverage rise to 95%. O2 and Vodafone have also committed to making improvements to their shared network to deliver similar levels of coverage.

Consumers in Northern Ireland will also benefit from the UK-wide Mobile Infrastructure Project (MIP). This project aims to improve mobile voice coverage in areas where coverage is poor or non-existent and to improve coverage on ten of the UK's busiest A roads, including two in Northern Ireland. Further information on MIP can be found in section 5.1 of this report.

Figure 1.15 2G and 3G mobile coverage



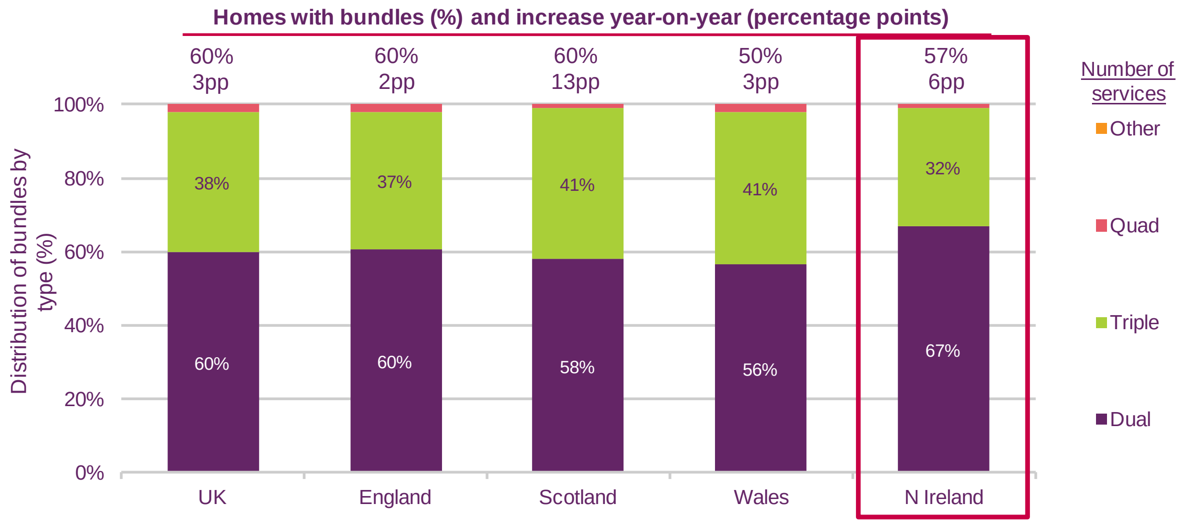
Source: Ofcom, The availability of communications services in the UK, May 2013

1.4 Purchasing communications services

A majority of homes in Northern Ireland now buy their communications services in a bundle

Fifty-seven per cent of households in Northern Ireland now take two or more communications services as part of a package or bundle, up from 51% in Q1 2012. Of households with a bundle, two-thirds (67%) claim to have a 'dual play' package of two services bought together – the most popular combination being landline and broadband. (Figure 1.16)

Figure 1.16 Take-up of bundle, by type

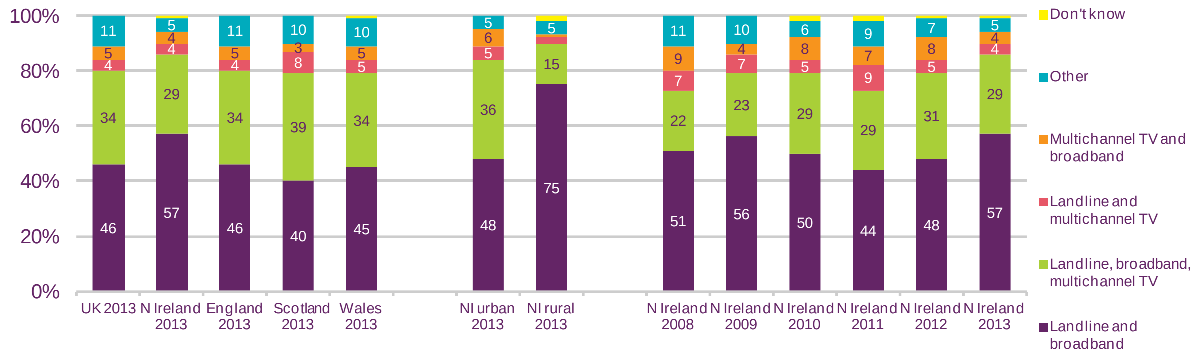


Source: Ofcom research, Q1 2013
Base: All adults aged 16+ with a package of services regardless of whether or not these include a discount (n = 2104 UK, 1309 England, 297 Scotland, 220 Wales, 278 Northern Ireland)
Note: Remaining percentages are Don't know responses

In Q1 2013, a third of all respondents in Northern Ireland (32%) took a dual-play bundle of landline and broadband, up from 24% the previous year. This is likely to be linked to the rise in broadband take-up in the nation over the same period.

Households in urban areas of Northern Ireland are more likely than households in rural areas to have at least one bundle (60% vs.52%). Furthermore, the composition of bundles of services purchased together varies markedly between urban and rural areas; due to the greater availability of cable services in towns, packages including multichannel TV are significantly more popular in urban than in rural areas.

Figure 1.17 Trends in purchasing multiple communication services from a single supplier



QG1. Do you receive more than one of these services as part of an overall deal or package from the same supplier?
Source: Ofcom research, Q1 2013
Base: All adults aged 16+ with a package of services regardless of whether or not these include a discount (n = 2104 UK, 278 Northern Ireland, 1309 England, 297 Scotland, 220 Wales, 145 Northern Ireland urban, 133 Northern Ireland rural, 192 Northern Ireland 2008, 264 Northern Ireland 2009, 332 Northern Ireland 2010, 222 Northern Ireland 2011, 254 Northern Ireland 2012, 278 Northern Ireland 2013)

1.5 Availability and take-up of communications services in Belfast and availability in Derry-Londonderry

Introduction

In its 2013/14 Annual Plan, Ofcom committed to undertake further research into the effect of communications infrastructure availability on high-density areas, including cities and towns. We will use this research, together with the conclusions of our work on the availability of communications services in the nations, which we published on 16 May 2013[5] and which looked primarily at the provision of services in rural areas, to help us understand the needs of different parts of the UK regarding communications services, how the market has delivered, and the impact of selected public interventions. As part of this research, Ofcom commissioned 11 case studies of UK cities identifying the availability of communications services and the factors driving availability. The cities are listed below.

1. **Northern Ireland:** Belfast, Derry-Londonderry
2. **England:** London, Birmingham, Manchester, Cambridge, Exeter
3. **Scotland:** Glasgow, Inverness
4. **Wales:** Cardiff, Bangor

[5] http://stakeholders.ofcom.org.uk/market-data-research/market-data/economic-geography/

The full Analysys Mason report can be found on Ofcom's website,[6] and a further overview of the findings is included in the *UK Communications Market Report*.

In parallel, we have used data from the British Population Survey (BPS) to consider how take-up of telecommunications services varies in different cities across the UK.

The second phase of our research, which will be the subject of a separate report, will consist of six case studies of international cities, as well as a more detailed analysis of some of the projects identified in phase one.

This section focuses on availability and take-up of telecommunications services in the city of Belfast, drawing on the key findings of our 2012 *Infrastructure Report* as well as our analysis of technology tracker data for the Belfast Metropolitan Area. We also present data from the 2012 *Infrastructure Report* in relation to the communications infrastructure in Derry-Londonderry. It was not possible to obtain technology tracker data for Derry-Londonderry.

Methodology

Belfast Metropolitan Area is a group of council areas comprising six local government districts – Belfast, Castlereagh, Carrickfergus, Lisburn, Newtonabbey and North Down.

To report on the data collected from adults in households located within the Belfast Metropolitan Area, data from three Ofcom surveys (Q2 2012, Q4 2012 and Q1 2013) were rolled into one dataset comprising 319 interviews within the area. This data were compared with the UK average across the same period.

Belfast

Summary of key findings

- Belfast is well served in terms of communications services, and the wider Metropolitan Area has a similar take-up of services to the average for the UK as a whole.

- Belfast has relatively high next-generation access (NGA) availability, compared to the other cities assessed, which appears to be partly due to the success of public interventions such as the Next Generation Broadband Project.

- Belfast has a lower WiFi hotspot density than average across the cities assessed.

- Belfast City Council intends significantly to extend 3G/4G/WiFi coverage to key locations such as the city centre, the Port of Belfast, and conference/ major event settings.

- The Super-Connected Belfast project, which is running as part of Belfast City Council's Investment Programme for 2012–15, aims to help Belfast become a 'world class' digital city by 2015.

[6] http://stakeholders.ofcom.org.uk/binaries/research/cmr/cmr13/cities-report.pdf

Belfast has a population of c.269,000, with residential premises accounting for 94% of all premises

Figure 1.18 shows the size of the city in terms of population and number of residential and non-residential premises. The population is based on the 2011 census and the number of premises is based on postcodes within the local authority boundary.

Belfast is the commercial and educational centre for Northern Ireland. For many years, Belfast's economy was fragile and supported by the government, and the city has recently undergone much redevelopment.[7] Belfast is now home to a strong software, financial services and telecoms sector, and is embracing new sectors of excellence in areas such as creative industries and advanced manufacturing'.[8]

Figure 1.18 City population and premises data

City	Population	Total premises	Business premises	Residential premises
Belfast	c.269,000	c.132,000	c.8000	c.124,000

Source: Analysys Mason

For the purposes of this study the city boundary is defined by Belfast City Council, as shown in the following figure:

Figure 1.19 Map of area local to Belfast highlighting city boundary

Source: Analysys Mason

Next-generation access (NGA) is available to 97% of premises in Belfast

Figure 1.20 identifies fixed network infrastructure for the two main operators, BT and Virgin Media. This includes the availability of both first-generation broadband (ADSL copper[9] and

[7] Source: Analysys Mason
[8] http://www.belfastcity.gov.uk/investinbelfastguide/growthsectors.asp
[9] Asymmetric digital subscriber line (ADSL) is a technology for transmitting digital information over existing copper telephone lines, which allows users to connect to the internet.

DOCSIS cable technologies[10]) and NGA infrastructure (FTTx[11] and DOCSIS v3.0 cable technologies[12]). Future NGA availability is predicted based on BT announcements for the upgrade of exchanges with NGA technology by 2015.

We estimate that the BT NGA network is currently available to around 85% of city premises. In the future this may change only as BT upgrades more of the cabinets attached to the city's serving exchanges, which have all been upgraded. Virgin Media's network is available to a high percentage (88%) of city premises, and on the basis of Virgin Media's announcements, this figure is unlikely to change before 2015. Total availability is slightly higher than the BT-only and Virgin Media-only figures, suggesting that there is a large overlap of the footprints of the two operator networks i.e. the majority of premises have access to the networks of both Virgin Media and BT.

In relation to the other 10 cities that we examine in detail in the *UK Communications Market Report,* Belfast's NGA availability is 26% higher than the city average.

Although the availability of first-generation broadband is 100%, some premises experience broadband speeds of less than 2Mbit/s, which is considered below the minimum requirement for a basic broadband service.

Figure 1.20 Fixed network infrastructure: availability by premises passed

Source: Analysys Mason, Ofcom Infrastructure Report 2012

Figure 1.21 shows the proportion of lines with a speed of less than 2 Mbit/s. The proportion of Belfast lines that have a speed of less than 2Mbit/s is 5.1%, which is 0.4% less than the average across the cities assessed.

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[10] Data over cable service interface specification (DOCSIS) is an international telecommunications standard that is employed by many cable operators to provide internet access over their existing infrastructure.
[11] Fibre to the exchange (FTTx) is a generic term used to describe any broadband network using optical fibre to replace all or part of the usual metal local loop used for last-mile telecommunications.
[12] DOCSIS v3.0 is the next generation of DOCSIS, which allows users to experience significantly faster speeds.

Figure 1.21 Percentage of lines that have a speed of less than 2Mbit/s, and relative positioning

Source: Analysys Mason, Ofcom Infrastructure Report 2012

Belfast has 15 exchanges, all of which have been upgraded to NGA

Figure 1.22 shows the number of exchanges serving the city postcodes, the percentage of lines that support both ADSL and ADSL Max[13], and the average number of lines per exchange.[14] Not all of these exchanges are physically located within the city boundary. All of the copper lines support basic broadband (both ADSL and ADSL Max).

Figure 1.22 Number of exchanges and % of lines with access to basic broadband

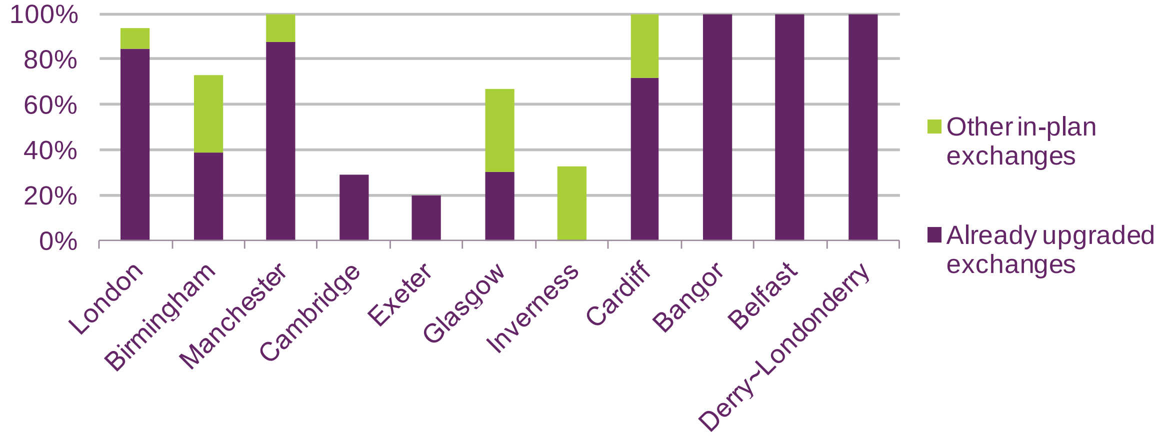
No. of exchanges serving city postcodes	% of lines that have access to both ADSL & ADSL Max	Average number of lines per exchange
15	100%	8800

Source: Analysys Mason

The BT fibre network comprises fibre-to-the-cabinet (FTTC) and fibre-to-the-home (FTTH) infrastructure. Figure 1.23 shows the FTTC status of the city exchanges according to BT's current roll-out plans, compared to the other cities assessed.

[13] ADSL Max is a 'rate-adaptive' variant of ADSL, where the transmitted bit rate varies depending on the physical conditions of the twisted-pair copper line, which may change over time. In contrast, the bit rate for ADSL is fixed and does not change.
[14] Source: Analysys Mason

Figure 1.23 FTTC status of exchanges serving city postcodes, according to BT's roll-out plans



Source: Analysys Mason

To date, 15 of the serving exchanges (that is 100% of total serving exchanges) have been upgraded to FTTC[15].

<u>Nine operators offer NGA services in Belfast</u>

In addition to the two main operators that own fibre network infrastructure (BT and Virgin Media), a number of alternative operators have their own fibre network infrastructure, or at least a point of presence i.e. an interconnection with another communications provider, in the city. Alternative operators tend to focus on providing services to larger business customers.

Seven alternative operators have been identified as having, as part of their national networks, a point of presence in the city: Atlas, Easynet, Eircom, Level3, TalkTalk, Virgin Media business, and Vodafone.[16]

Belfast has 150 WiFi hotspots, equivalent to 5.7 hotspots per 10,000 residents. Figure 1.24 shows key WiFi hotspot data for Belfast. The largest providers of WiFi infrastructure in UK cities are currently BT (branded as BT Openzone) and The Cloud, which is owned by BSkyB. Each operator owns a mix of outdoor and indoor WiFi access points. Other private and public organisations own hotspots, but they tend to make only a small contribution to a city's total. We have therefore used the total hotspots for BT and The Cloud to derive a city benchmark[17]. Belfast has 8% fewer hotspots per 10,000 city residents than the average across the cities analysed.

[15] Note that only a proportion of the cabinets which connect to the upgraded exchanges have been upgraded. Although data are not available on the actual number of cabinets upgraded across the city, BT has stated that for the national FTTC roll-out, on average of 85% of premises are passed with NGA, which equates to an average 70% of cabinets per exchange area.
[16] Source: Analysys Mason
[17] There is in general a good correlation between number of hotspots and number of the city residents, therefore that ratio forms a suitable benchmark for assessing Wi-Fi availability between cities

Figure 1.24 Key city hotspots data

City total	Total hotspots per 10,000 city residents (city benchmark)	Total hotspots per 10,000 city residents (11 city average)	Percentage difference from 11 city average
150	5.7	6.2	-8%

Source: Analysys Mason

<u>3G services are available through at least four operators in 99% of Belfast</u>

Figure 1.25 shows the proportion of premises that are covered by 3G networks, compared to the average across the other cities assessed, and the UK as a whole. At the time of writing EE was the only operator providing 4G coverage in Belfast, although it appears to be slightly less extensive than is the case for other cities which currently have 4G coverage[18].

Figure 1.25 3G mobile coverage in city

% of premises with 3G signal from four operators (city benchmark)	% of premises with 3G signal from four operators (11 city average)	% of premises with 3G signal from four operators (UK average)	Percentage difference from 11-city average
99%	95.7%	77.3%	+3.3%

Source: Analysys Mason, Ofcom Infrastructure Report 2012

Ninety-eight per cent of premises in Belfast have a choice of four or more fixed-line telecoms providers. The classification assigned by Ofcom to each exchange is a good indicator of local competition in communications services. The classification is based on the number of operators with a presence in the exchange, typically local loop unbundling operators offering first-generation broadband wholesale services:

- a classification of 3 means that four or more operators (including BT) are present
- a classification of 2 means that two or three operators (including BT) are present
- a classification of 1 means that BT is the only operator present.

Figure 1.26 shows for each market classification the key city exchange data:

[18] Source: Analysys Mason

Figure 1.26 Key city exchange data

Ofcom classification	Number of city exchanges	% of total exchanges	% of premises passed
3	12	80%	98%
2	2	13%	<2%
1	1	7%	<1%

Source: Analysys Mason

Eighty per cent of exchanges are classed according to the Ofcom scheme as being within classification 3, and pass 98% of lines. Virgin Media also has a presence in 100% of exchange areas[19]. The number of operators present in an exchange is generally a good indicator of the degree of competition, and these findings suggest that there is a level of competition in provision of first-generation broadband services across the city[20].

An equivalent or similar classification for SFBB is not yet established (although communications providers are currently using the generic Ethernet access product from BT Wholesale to provide retail superfast services).

<u>Including superfast broadband, the average maximum modem sync speed for Belfast is 37.2 Mbit/s</u>

Figure 1.27 compares the average maximum modem sync speed for just basic broadband lines, and for all lines, (including basic and SFBB). The speed values are compared to the city average. Note that the result for all lines (including SFBB lines) is for illustrative purposes only, as we have assumed all superfast lines to be 40Mbit/s. Not all broadband connections provided by NGA networks will necessarily achieve sync speeds of 40Mbit/s, as the speed will depend on the length and quality of the copper connection from the street cabinet to the consumer's premises.

Figure 1.27 Average maximum modem sync speed compared to other cities

Excluding SFBB lines			Including SFBB lines			
Average maximum speed (Mbit/s)	City average (Mbit/s)	% difference from city average	Average maximum speed (Mbit/s)	City average (Mbit/s)	UK average (Mbit/s)	% difference from city average
16.1	14.1	+14%	37.2	29.9	12.7	+24%

Source: Analysys Mason, Ofcom Infrastructure Report 2012

19 Source: Analysys Mason

20 This does not represent Ofcom's assessment of competition for the purpose of any market analysis under the Competition Act 2003. Ofcom has recently published a consultation document in our current review of the Wholesale Broadband Access Market (see: http://stakeholders.ofcom.org.uk/binaries/consultations/review-wba-markets/summary/WBA July 2013.pdf)

A variety of social factors appear to be driving the availability of communications infrastructure across the city

Belfast City Council has a vision in which all individuals have access to the internet as well as the skills, resources and technical support to make that access meaningful and to allow them actively to participate in social, economic and political life. The social objectives of deploying digital infrastructure are specifically to:

- provide more direct and regular interaction opportunities between government and citizens through improved digital access to democratic processes;

- increase access to flexible working, particularly for those employees with childcare or care-giving responsibilities;

- facilitate working time adjustments for those attending education or training; and

- double the volume of e-commerce in Belfast by 2015[21].

The Digital Northern Ireland 2020 (DNI2020) Advisory Board[22] was set up in 2010. It is supported by Invest NI (INI) and co-exists with DETI, Matrix, WHISPLE (a network of IT companies) and the Digital Network as part of INI's collaborative network programme. The vision of DNI2020 is to fully exploit the benefits of a digital platform for the Northern Ireland economy to maximise economic growth, improved quality of life and to achieve social uplift and a consequent improvement in quality of life for all NI citizens. By the end of this decade, it is intended that Northern Ireland will be the world's preferred destination for knowledge economy investment. The mission of DNI2020 is to engage with stakeholders (business, community, citizens and government), and to focus the activities of key players and influencers to transform Northern Ireland into a 21st century global knowledge economy and make it a preferred destination for inward investment.

NGA availability in Belfast appears to have benefited from the success of public interventions

During 2009, DETI entered into a partner agreement with BT on the £51m Next Generation Broadband Project to upgrade 1265 cabinets across Northern Ireland, some of which were located in Belfast.

In addition, the Super-Connected Belfast project, which is running as part of Belfast City Council's Investment Programme for 2012–15. received £13.7m from the Urban Broadband Fund. The project is planned to provide city-wide access to speeds of at least 80Mbit/s, with high-speed ultrafast capacity (of at least 100Mbit/s) for businesses which need it. The Council will invest an additional £3m as part of its investment programme, while the private sector will provide a further £8m. The project is expected to help Belfast become a 'world class' digital city by 2015.

In a bid to augment its tourism and connectivity strengths, the Council also intends to significantly extend 3G/4G/WiFi coverage to key locations such as the city centre, the Port of Belfast, and major conference/ event settings.

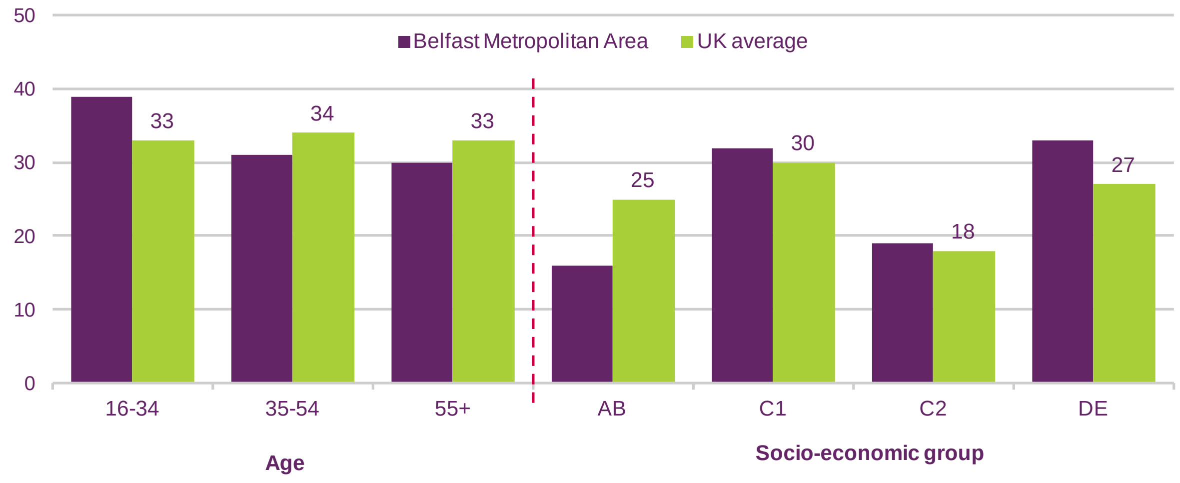
[21] Source: Analysys Mason
[22] http://www.dni2020.com/

Four in ten adults in the Belfast Metropolitan Area are aged 16-34

Belfast Metropolitan Area is a group of council areas comprising six local government districts – Belfast, Castlereagh, Carrickfergus, Lisburn, Newtonabbey and North Down. The age profile in Belfast Metropolitan Area is younger than the profile for the UK average. Across the Belfast Metropolitan Area four in ten adults are aged 16-34 (39%) compared to one in three (33%) across the UK as a whole.

In terms of the socio-economic group profile, one in three adults in Belfast Metropolitan Area live in DE households. Adults in the Belfast Metropolitan Area are less likely than the UK average to live in an AB socio-economic group household (16% vs. 25%) and more likely to live in a DE household (33% vs. 27%).

Figure 1.28 Age and SEG profile

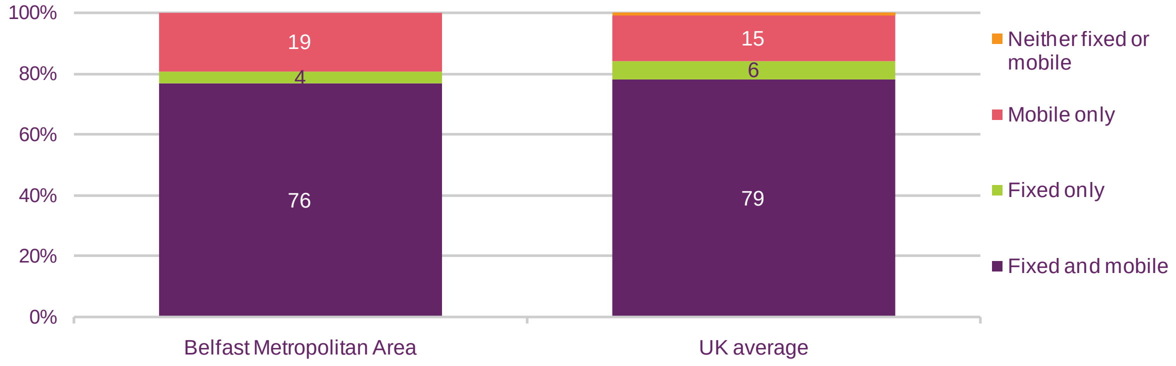


Source: Ofcom research, Q2 2012, Q4 2012, Q1 2013
SF. What is your age?/ QZ8. What is the occupation of the main wage earner in your household?
Base: Adults aged 16+ (n = 319 Belfast Metropolitan Area, 9373 UK).

One in five households in the Belfast Metropolitan Area is mobile-only

One in five (19%) households in the Belfast Metropolitan Area have mobile as the only form of telephony, similar to the average for the UK as a whole (15%). Most households (76%) have both fixed and mobile, as is also the case for the UK average (79%).

Figure 1.29 Household penetration of fixed and mobile telephony

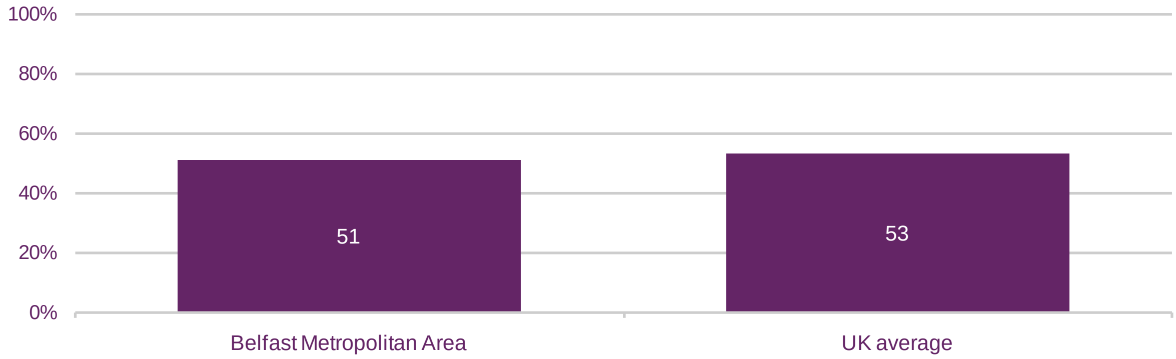


Source: Ofcom research, Q2 2012, Q4 2012, Q1 2013
QC1/ QD1. Is there a landline phone in your home that can be used to make and receive calls?/ How many mobile phones in total do you and members of your household use?
Base: Adults aged 16+ (n = 319 Belfast Metropolitan Area, 9373 UK).

Half of all mobile phone users in Belfast Metropolitan Area use a smartphone

Half (51%) of all mobile phone users in Belfast Metropolitan Area use a smartphone, similar to the average for the UK as a whole (53%).

Figure 1.30 Take-up of smartphones among mobile phone users



Source: Ofcom research, Q2 2012, Q4 2012, Q1 2013
QD24B. Do you personally use a smartphone? A smartphone is a phone on which you can easily access emails, download files and applications, as well as view websites and generally surf the internet. Popular brands of smartphone include BlackBerry, iPhone and Android phones such as the Samsung Galaxy.
Base: Adults aged 16+ (n = 319 Belfast Metropolitan Area, 9373 UK).

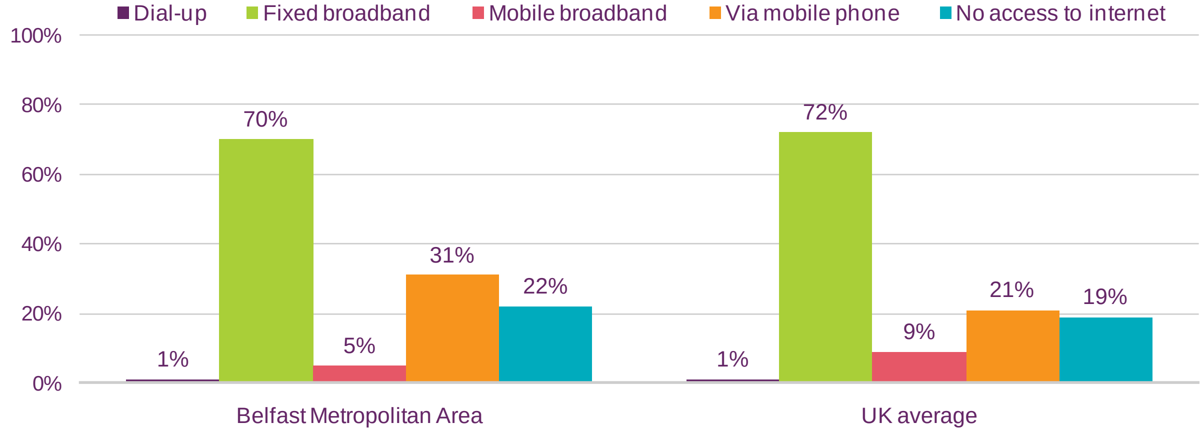
Belfast Metropolitan Area households are more likely to access the internet via a mobile phone

Eight in ten (78%) households in Belfast Metropolitan Area have access to the internet at home, similar to the UK average (81%). The most popular type of internet access for those in the Belfast Metropolitan Area is fixed broadband; used by seven in ten (70%) households, similar to the average for the UK.

Around one in three (31%) households in the Belfast Metropolitan Area access the internet at home using a mobile phone or smartphone, either through a WiFi network or via the phone's mobile network. Accessing through a mobile phone is less likely across the UK as a whole (21%).

One in twenty (5%) households in the Belfast Metropolitan Area access the internet at home using mobile broadband, connecting via a USB stick or dongle, or built-in connectivity in a laptop, netbook or tablet with a SIM card. Accessing through mobile broadband is more likely across the UK as a whole (9%).

Figure 1.31 Internet access, by type

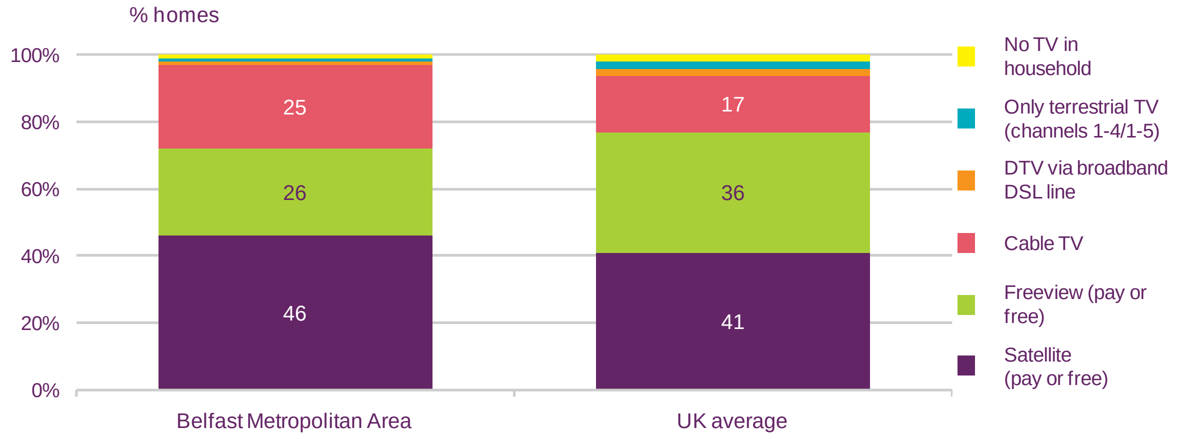


Source: Ofcom research, Q2 2012, Q4 2012, Q1 2013
QE2/ QE9. Do you or does anyone in your household have access to the internet/ world wide web at home?/ Which of these methods does your household use to connect to the internet at home?
Base: Adults aged 16+ (n = 319 Belfast Metropolitan Area, 9373 UK).

<u>Households in Belfast Metropolitan Area are more likely to receive their main TV service via cable and less likely via Freeview, compared to the UK average</u>

The most popular main TV service in Belfast Metropolitan Area is satellite TV (46%), similar to the UK average (41%). Households in the Belfast Metropolitan Area are more likely than the UK average to receive their main TV service via cable TV (25% vs. 17% UK) and less likely to receive their main TV service via Freeview (26% vs. 36%).

Figure 1.32 Main set TV share, by platform



Source: Ofcom research, Q2 2012, Q4 2012, Q1 2013
QH1a/ QH1b. Which, if any, of these types of television does your household use at the moment?/ And which of these do you consider is your main type of television?
Base: Adults aged 16+ (n = 319 Belfast Metropolitan Area, 9373 UK).

Derry-Londonderry

Summary of key findings

- Derry-Londonderry has the highest level of NGA availability of all the cities assessed, which appears to be partly due to a successful public-sector intervention project, the Next Generation Broadband Project.

- Derry-Londonderry has recently become the first city in the UK to have all of its cabinets upgraded by BT.

- Derry-Londonderry is among 12 cities that will share £50m as part of a second round of funding from the UK government's Super-Connected Cities project, which will help provide homes and businesses in the city with ultrafast broadband (at least 80Mbit/s to 100Mbit/s) and high speed wireless internet access.

- Despite the city's high NGA availability, 11.7% of lines in Derry-Londonderry deliver a speed less than 2Mbit/s. This is because the city boundary incorporates a higher proportion of rural areas than the other cities assessed, such that the average length of exchange loops is likely to be higher than for most other cities.

- Derry-Londonderry is the only one of the cities assessed to have premises with no coverage by any mobile operator, although only 2% of premises fall into this category.

- Derry-Londonderry has a much lower WiFi hotspot density compared to other smaller cities in the study.

- Derry City Council has funded the installation of a public WiFi network in the city, which will supplement provision of commercial hotspots.

Derry-Londonderry has a population of 110,000, with residential premises accounting for 95% of all premises

Figure 1.33 shows the size of the city in terms of population and number of residential and non-residential premises. The population is based on the 2011 Census and the number of premises is based on postcodes within the local authority boundary.

The economy of Derry-Londonderry has historically been dominated by the textile industry, but this has shown a large decline in recent times. Some production still remains, with the large conglomerate Dupont operating a factory in the area. The digital industry has particularly been encouraged, and the largest employers are international firms in thise sector; for example, Seagate, which manufactures hard disk drives, has a large presence. The city economy has recently been boosted by tourism, supported by the appearance of budget airlines. Derry-Londonderry is UK City of Culture for 2013[23].

[23] Source: Analysys Mason

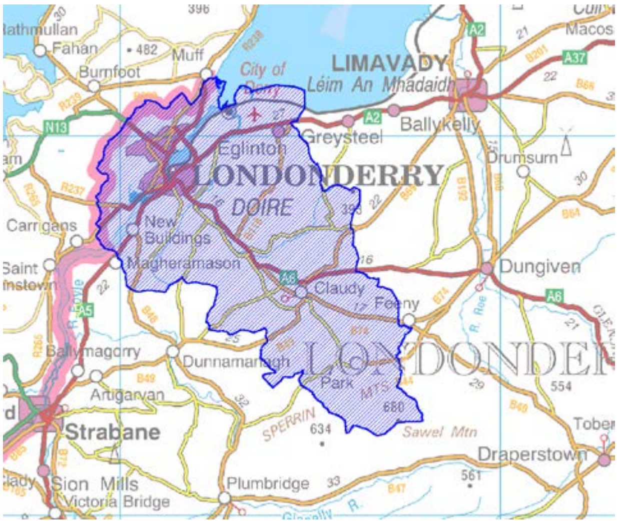
Figure 1.33 City population and premises data

City	Population	Total premises	Business premises	Residential premises
Derry~Londonderry	c.110,000	c.43,000	c.2000	c.41,000

Source: Analysys Mason

For the purposes of this study the city boundary is defined by that of Derry City Council, as shown in the following figure:

Figure 1.34 Map of local area highlighting city boundary



Source: Analysys Mason

<u>Next-generation access is available to 99% of premises in Derry-Londonderry</u>

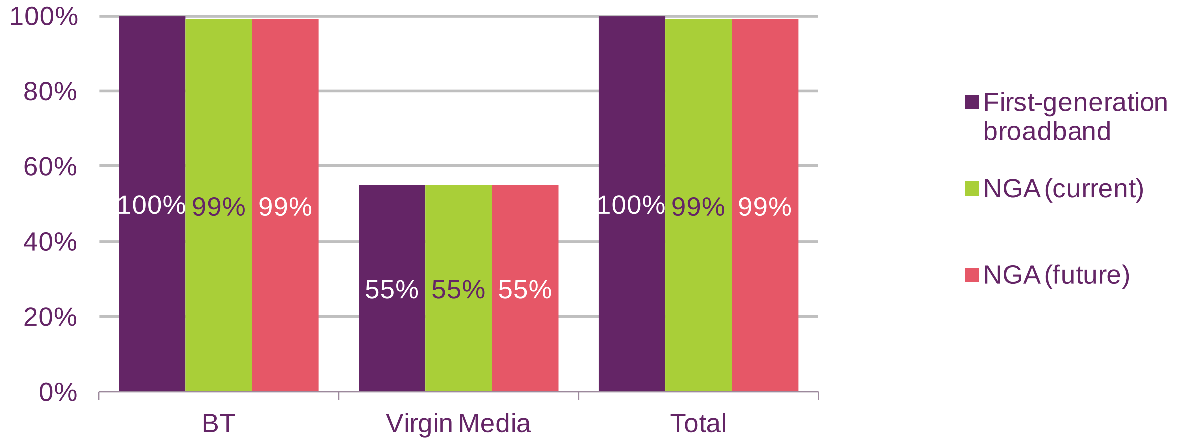
Figure 1.35 identifies fixed network infrastructure for the two main operators, BT and Virgin Media. This includes availability of both first-generation broadband (ADSL copper and DOCSIS cable technologies) and NGA infrastructure (FTTx and DOCSIS v3.0 cable technologies). Future NGA availability is predicted based on BT announcements for the upgrade of exchanges with NGA technology by 2015.

The BT NGA network is currently available to almost all city premises, since all exchanges and cabinets across the city have been upgraded. Virgin Media's network is available to around 55% of city premises, and based on its declared intentions, this figure is unlikely to change by 2015. Total availability is near-identical to the BT-only figures, suggesting that there is a substantial overlap of Virgin Media's network by the BT network i.e. virtually all of the premises that have access to Virgin media's network also have access to BT's network.

In relation to the 10 other cities which we examine in detail in the *UK Communications Market Report*, Derry-Londonderry's NGA availability is 28% more than the average.

Although the availability of first-generation broadband is 100%, some premises experience broadband speeds of less than 2Mbit/s, which is considered below the minimum requirement for a basic broadband service.

Figure 1.35 Fixed network infrastructure: availability by premises passed



Source: Analysys Mason, Ofcom Infrastructure Report 2012

Figure 1.36 shows the proportion of lines with a speed of less than 2 Mbit/s. The proportion of Derry-Londonderry lines in this category is 11.7%, which is 6.2% higher than the average across the cities assessed. It is very likely that the lines measured as less than 2Mbit/s were, and in some cases continue to be, based on first-generation broadband infrastructure. However, this appears to be a reflection of choices made by end-users rather than a lack of NGA infrastructure. Ninety-nine per cent of premises across the city fall within areas of NGA infrastructure coverage, and so can gain access to high-speed connections. As the city boundary takes in a largely rural area, the slow speeds are likely due to longer line lengths.

Figure 1.36 Percentage of lines with speed less than 2Mbit/s, and relative positioning

Source: Analysys Mason, Ofcom Infrastructure Report 2012

Derry-Londonderry has ten copper exchanges, all of which have been upgraded to NGA

Figure 1.37 shows the number of exchanges serving the city postcodes, the percentage of lines that support both ADSL and ADSL Max[24], and the average number lines per

[24] ADSL Max is a 'rate-adaptive' variant of ADSL, where the transmitted bit rate varies depending on the physical conditions of the twisted-pair copper line, which may change over time. In contrast, the bit rate for ADSL is fixed and does not change.

exchange.[25] Not all of these exchanges are physically located within the city boundary. All of the copper lines support basic broadband (both ADSL and ADSL Max).

Figure 1.37 Number of exchanges and % of lines with access to basic broadband

No. of exchanges serving city postcodes	% of lines that have access to both ADSL & ADSL Max	Average number of lines per exchange
10	100%	4300

Source: Analysys Mason

<u>Five operators offer NGA services in Derry-Londonderry</u>

In addition to the two main operators that own fibre network infrastructure (BT and Virgin Media), a number of alternative operators also have their own fibre network infrastructure, or at least a point of presence, in the city. Alternative operators tend to focus on providing services to larger business customers.

Three alternative operators have been identified as having, as part of their national networks, a point of presence in the city: Hibernia, Level3 and Virgin Media business[26].

<u>Derry-Londonderry has 20 WiFi hotspots, equivalent to 1.8 hotspots per 10,000 residents</u>

Figure 1.38 shows key WiFi hotspot data for Derry-Londonderry. The largest providers of WiFi infrastructure in UK cities are currently BT (branded as BT Openzone) and The Cloud, which is owned by BSkyB. Each operator owns a mix of outdoor and indoor WiFi access points. Other private and public organisations own hotspots, but they tend to make only a small contribution to a city's total. We have therefore used the total hotspots for BT and The Cloud to derive a city benchmark[27]. Derry-Londonderry has 70% fewer hotspots per 10,000 city residents than the city average.

Figure 1.38 Key city hotspots data

City total	Total hotspots per 10,000 city residents (city benchmark)	Total hotspots per 10,000 city residents (11 city average)	Percentage difference from 11 city average
20	1.8	6.2	-70%

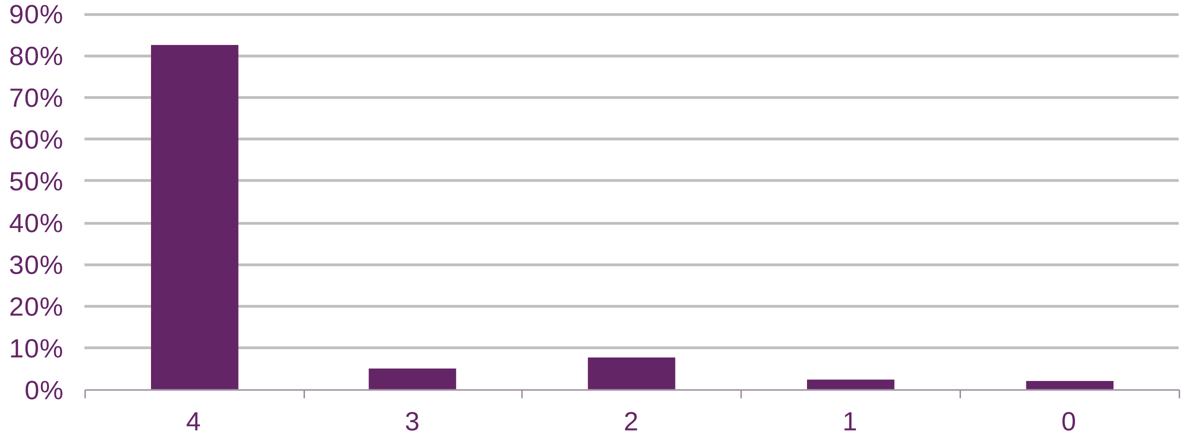
Source: Analysys Mason

<u>Eighty-two per cent of premises in Derry-Londonderry receive 3G coverage from four operators</u>

Figure 1.39 shows the proportion of premises that are covered by 3G networks, split by number of mobile operators providing coverage, as 82.7%. This is 13% lower than the average across the 11 cities assessed, but 5.4% greater than the UK average. At the time of writing, no operators are currently providing 4G coverage in Derry-Londonderry.

[25] Source: Analysys Mason.
[26] Source: Analysys Mason
[27] There is in general a good correlation between number of hotspots and number of the city residents, therefore that ratio forms a suitable benchmark for assessing Wi-Fi availability between cities.

Figure 1.39 3G mobile coverage in city



Source: Analysys Mason

<u>Ninety per cent of premises in Derry-Londonderry have a choice of four or more fixed line telecoms providers</u>

The classification assigned by Ofcom to each exchange is a good indicator of local competition in communications services. The classification is based on the number of operators with a presence in the exchange, typically local loop unbundling operators offering first-generation broadband wholesale services. The classifications are:

- a classification of 3 means that four or more operators (including BT) are present
- a classification of 2 means that two or three operators (including BT) are present
- a classification of 1 means that BT is the only operator present.

Figure 1.40 shows, for each market classification, the key city exchange data:

Figure 1.40 Key city exchange data

Ofcom classification	% of total exchanges	% of premises passed
3	30%	90%
2	20%	7%
1	50%	3%

Source: Analysys Mason

Only 30% of serving exchanges have as classification 3, but these pass 90% of lines. Virgin Media also has a presence in 40% of exchange areas[28]. These findings illustrate that there is a level of competition in provision of first-generation broadband services across the city[29].

An equivalent or similar classification for SFBB is not yet established (although communications providers are currently using the generic Ethernet access product from BT Wholesale to provide retail superfast services).

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[28] Source: SamKnows
[29] Again, this is not an assessment of competition for the purpose of a market analysis under the Competition Act 2003.

Including superfast broadband, the average maximum modem sync speed for Derry-Londonderry is 35Mbit/s

Figure 1.41 compares the average maximum modem sync speed for just basic broadband lines, and for all lines including basic and SFBB. The speed values are compared to the other cities. Note that the result for all lines (including SFBB lines) is for illustrative purposes only, as we have assumed all superfast lines to be 40Mbit/s. Not all broadband connections provided by NGA networks will necessarily achieve synch speeds of 40Mbit/s, as the speed will depend on the length and quality of the copper connection from the street cabinet to the consumer's premises.

Figure 1.41 Average maximum modem sync speed compared to other cities

Excluding SFBB lines			Including SFBB lines			
Average maximum speed (Mbit/s)	City average (Mbit/s)	% difference	Average maximum speed (Mbit/s)	City average (Mbit/s)	UK average (Mbit/s)	% difference
11.9	14.1	-15%	35	29.9	12.7	+17%

Source: Analysys Mason

The average maximum modem sync speed for basic broadband lines across the city is less than the average by 15%.The average maximum modem speed for all broadband lines across the city is greater than the average by 17%.

Digital Derry has been set up to support, promote and grow the digital content sector in Derry-Londonderry

Digital Derry is a collaborative project, involving private, public and academic organisations, set up to support, promote and grow the digital content sector in Derry-Londonderry and the north-west of Northern Ireland. This project was started by the Londonderry Chamber of Commerce, with the support of Derry City Council, and now comprises an action team made up of representatives from private sector companies, the University of Ulster, and local and regional support organisations. To help deliver this project, the action team has appointed a Digital Champion. The project is part-funded by Derry City Council, ILEX (an urban regeneration company) and the European Regional Development Fund, under the European Sustainable Competitiveness Programme for Northern Ireland.

Derry-Londonderry appears to have benefited from high NGA availability, partly due to a successful public-sector intervention project

Derry-Londonderry has benefited from the Next Generation Broadband Project, a £51m partner agreement between DETI and BT to upgrade 1265 cabinets across Northern Ireland. The city has recently become the first city in the UK to have all of its cabinets upgraded by BT.

Derry-~Londonderry is also among 12 cities that will share £50m as part of a second round of funding from the UK government's Super-Connected Cities project. Derry City Council says the fund will help provide homes and businesses in the city with ultrafast broadband (at least 80Mbit/s to 100Mbit/s) and high speed wireless internet access[30].

In addition, Derry City Council has funded the installation of a public WiFi network in the city, which will supplement provision of commercial hotspots. This was established through the DETI Broadband Flagship Initiative, the £1.38m 'Wireless City' scheme.

[30] http://www.londonderrysentinel.co.uk/news/business/local-businesses/londonderry-s-economy-to-get-superfast-broadband-boost-1-4556866