

Annex 1

Use of data from communications providers

- 1.1 This annex explains our approach to obtaining and analysing service quality information from communications providers for *Comparing Service Quality*.
- 1.2 Ofcom requested data from providers for this report using our powers under section 136 of the Communications Act 2003. Under section 136(1) we may require providers of electronic communications networks and electronic communications services to provide us with all such information as we consider necessary for the purpose set out in section 136(2). That purpose is the carrying out, with a view to publication and in the interests of the end-users of public electronic communications services, such as providers' customers, of comparative overviews of the quality of such services.¹
- 1.3 On receiving responses to the information request, we conducted our own analysis of the data to assure ourselves that it had been provided on a comparable basis. Where possible, we cross-referred the information to other information held by Ofcom to ensure it was consistent. Where we had concerns about the accuracy or comparability of the data supplied, we requested further clarification from relevant providers under our section 136 powers.
- 1.4 As noted in the report, in several areas we were not able to satisfy ourselves that the data had been supplied on a sufficiently comparable basis to provide a comparison that would be useful for consumers. In these cases, we have not published information on a provider specific basis. Instead, we have either published an aggregate measure to provide an overview of service quality across the sector where we think this would be useful or not published the information at all. The key metrics we intended to publish on a provider-specific basis but have not been able to for the first report are:
 - The proportion of new landline and broadband services provided on time
 - The frequency with which faults occurred
 - The time taken to resolve faults
 - The rate of appointments missed by some provider's workforces
 - The average time taken to respond to customer emails
- 1.5 As noted in section 1, we will continue to discuss these metrics with providers and intend to use new powers under the Digital Economy Bill to ensure that data is collected in a way that will allow for a meaningful comparative overview to be made in future reports.
- 1.6 The metrics we have derived from information supplied by providers that we have published in this report on a provider-specific or aggregate basis are:
 - i. The percentage of orders for new service completed within 7, 14, 21 and 28 days (in urban and rural areas) [provider-specific]

¹ As well as prices of such services.

- ii. Average time taken to provide a new landline, broadband or landline and broadband service [aggregate]
- iii. Percentage of orders for landline and broadband services taking more than 30 and 60 days to provide [aggregate]
- iv. Average time taken to provide new services by order type [Openreach provider aggregate and Virgin Media only]
- v. The percentage of appointments missed by workforce - overall, repair, provisioning [Openreach provider aggregate and Virgin Media only]
- vi. Percentage of customer contacts by contact method [provider-specific]
- vii. Overall average call waiting time [provider-specific]
- viii. Average call waiting time by call destination - sales, retentions, technical support [aggregate]
- ix. The percentage of customer calls 'abandoned' [provider-specific]
- x. Issues resolved on first contact [aggregate only]

1.7 In this annex, we set out how we have derived these metrics from the data supplied by providers. Unless otherwise specified, all metrics have been calculated based on data for the entire calendar year 2016.

In scope providers

1.8 The threshold for providers to be included in the scope of our information request was that they had 1.5% share of the consumer broadband, landline or mobile markets throughout 2016 (this is the same criteria that we have used in our quarterly Telecoms and Pay TV reports which we have been publishing since 2011). The providers that were included were BT, EE, O2, Plusnet, Post Office, Sky, TalkTalk, Tesco Mobile, Three and Virgin Media/Mobile. KCOM was also included as the universal service provider in Hull. Providers that had 1.5% market share for only part of 2016 were not included.

1.9 In some cases, although providers were in scope of the report, they were not able to provide information in line with the definitions we had specified for certain metrics to ensure we received comparable data. Where we did not believe a meaningful comparison could be made with the data provided by an individual provider, we excluded them from our provider-specific analysis. In some instances, while the information provided by a particular provider was not supplied on a sufficiently comparable basis to publish in a provider-specific form, we included it in our aggregate metrics if we believed this would contribute to giving a meaningful indication of cross-sector performance that would be useful to end-users.

Provisioning metrics (fixed services)

- 1.10 To publish a comparative overview of the experience of obtaining a new landline or broadband service, we asked providers to supply data on every order for residential fixed voice and/or fixed broadband that was placed and completed in 2016. Orders that were placed but subsequently cancelled by the provider or customer were excluded.
- 1.11 For each order, we asked providers to supply information on:
- The date on which the provider logged the order request.
 - The date agreed with the customer for the provision of the new service.
 - The number of times the date originally agreed with the customer for the provision of the new service was rearranged.
 - The date on which the billing for the service began.
 - The type of service being provided (landline, broadband or both)
 - The type of product being provided (e.g. ADSL, Fibre-to-the-cabinet, cable)
 - The type of order, for example, whether it required a new line to be installed or an existing line to be restarted etc
 - The Post Code for the address at which the service was provided.
- 1.12 In analysing the data, we excluded any orders where the date billing started preceded the date the order was placed. We also removed any orders that were not placed or completed in 2016. These removed orders accounted for less than 1% of the overall dataset.
- 1.13 Using this information, we calculated the time taken for an order to be completed by taking the difference between the date the order was placed and the date on which billing for the service began. Most providers confirmed that they expected the date on which billing for the service began would be the date the service was made available to the customer. We excluded those providers that indicated this would not be the case, or asked them to provide alternative information.
- 1.14 All relevant metrics calculated using this provisioning data are measured in calendar days, not working days.

Metric i): *The percentage of orders for new service completed within 7, 14, 21 and 28 days (in urban and rural areas)*

- 1.15 In this report we have presented the time taken to complete orders as a cumulative percentage of orders completed within 1 week (7 calendar days), 2 weeks (14 calendar days), 3 weeks (21 calendar days) and 4 weeks (28 calendar days).
- 1.16 In order to identify whether an order was placed for a service in an urban or rural area, we have used the Locale classification.² Locale is a third-party data source based on the analysis of 2011 census output areas (OAs). Each OA is assigned to one of seven Locale Groups using a combination of Government conurbation definitions, population density at the OA- and postcode sector-levels, urban sprawl boundaries, OS roadmaps and additional visual inspection. Orders where the postcode was invalid or omitted were excluded from the rural/urban analysis.

² http://www.bluewavegeographics.com/images/LOCALE_Classification.pdf

- 1.17 The providers we have reported on for this metric are: BT, TalkTalk, Sky, Virgin Media and KCOM.
- 1.18 As EE indicated it was not able to confirm that the date it had supplied for when billing began always coincided with when the ordered service was made available to the customer we excluded its data from this analysis.
- 1.19 Plusnet was unable to provide postcode level information and we therefore excluded it from this analysis.
- 1.20 Post Office indicated that it could not guarantee the accuracy of the information on when billing had started supplied for a small proportion of orders where a customer had taken subscriptions for multiple services at different times. As we considered that inaccurate information supplied in relation to this small proportion of orders could affect its performance relative to other providers, we excluded it from this analysis.
- 1.21 Virgin Media indicated that for some orders the information supplied on when billing started would not be the best proxy for the point at which the service was available to the customer. Analysis of its data for this metric is instead based on information Virgin Media supplied on i) the point an engineer recorded an installation as complete (for orders requiring an engineer) or ii) the scheduled delivery date of customer equipment (for 'quick start' self-install orders).
- 1.22 Given Virgin Media's network is not currently available in many rural areas and that it had a relatively small proportion of orders in rural areas in 2016, we did not include its data on rural orders in this analysis.
- 1.23 Given the concentration of KCOM's network in the Hull and East Yorkshire areas, and that it had a relatively small proportion of orders in rural areas in 2016, we combined its urban and rural data for the purposes of this analysis.

Metric ii): Average time taken to provide a new landline, broadband or landline and broadband service.

- 1.24 To calculate this metric we took the mean average difference between the date the order was placed and the date that billing started/the service was provided for voice only, broadband only and voice and broadband orders across providers.
- 1.25 As EE indicated it was not able to confirm that the date it had supplied for when billing began always coincided with when the ordered service was made available to the customer we excluded its data from this analysis.
- 1.26 Post Office indicated that it could not guarantee the accuracy of the information it had supplied on when billing began for orders where a customer had taken subscriptions for multiple services at different times. We consider that the information supplied for this small proportion of orders would not have a material impact on the overall sector-wide analysis and we therefore included its data in this analysis.

Metric iii): Percentage of orders for landline and broadband services taking more than 30 and 60 days to provide.

- 1.27 This metric was calculated by taking the proportion of orders where the difference between the date orders were placed and the date billing began/the service was

provided was greater than 30 and 60 calendar days, as a percentage of overall orders across providers included in the analysis.

- 1.28 As EE indicated it was not able to confirm that the date it had supplied for when billing began always coincided with when the ordered service was made available to the customer we excluded its data from this analysis.
- 1.29 Post Office indicated that it could not guarantee the accuracy of the information it had supplied on when billing began for orders where a customer had taken subscriptions for multiple services at different times. We consider that the information supplied for this small proportion of orders would not have a material impact on the overall sector-wide analysis and we therefore included its data in this analysis.

Metric iv) Average time taken to provide new services by order type [Openreach provider aggregate and Virgin Media only]

- 1.30 We calculated the mean average difference between the date the order was placed and date billing began for each order type for providers on Openreach's network (BT, TalkTalk, Sky, Plusnet, Post Office). Where providers supplied information on orders that did not meet one of the specified order types, we have either mapped these orders onto the specified order types after seeking clarification from providers or excluded them from this order type analysis. We have also published the percentage of orders each order type made-up from the overall dataset for the providers on the Openreach network as an indication of how common different order types are. It should be noted that while the order types we specified broadly map onto those used by Openreach, the terms and definitions used are not identical.
- 1.31 As EE indicated it was not able to confirm that the date it had supplied for when billing began always coincided with when the ordered service was made available to the customer we excluded its data from this analysis.
- 1.32 Post Office indicated that it could not guarantee the accuracy of the information it had supplied on when billing began for orders where a customer had taken subscriptions for multiple services at different times. We consider that the information supplied for this small proportion of orders would not have a material impact on the overall sector-wide analysis and we therefore included its data in this analysis.
- 1.33 Separately, we have published information on the average time taken by Virgin Media to provide services by order type (engineer install and quickstart self install) and the percentage of orders that fell into each category. Virgin Media has distinct order types reflecting its separate network and processes. To calculate the 'engineer install' order type, we combined information Virgin Media provided on three separate order types: 1-man existing install, 1-man new install and 2-man new install.

Missed appointments (fixed services)

Metric v): The percentage of appointments missed by workforce

- 1.34 Ofcom requested that each fixed provider supply the total number of repair and provisioning appointments booked, missed and missed due to a customer for each month in 2016. Provisioning appointments were defined as appointments for the provision of a residential fixed voice and/or fixed broadband service that has been made with a customer, and that requires a visit to the customer's premises by an engineer or technician. Repair appointments were defined as appointments for fault repair to a residential fixed voice and/or fixed broadband service that has been made

with a customer, and that requires a visit to the customer's premises by an engineer or technician.

- 1.35 For those on the Openreach network, we asked for this data to be separated into Openreach and own workforce/other third party appointments. If an appointment was rearranged prior to the calendar day on which it was originally agreed to take place, we specified that it should not be reported as 'missed' for our purposes.
- 1.36 To calculate a rate of appointments missed for which the responsibility was not the customer's, we subtracted the number of appointments missed due to a customer from the total number of appointments missed and derived this as a percentage of overall appointments booked.
- 1.37 After obtaining the information, we identified differences in the way appointments are defined as missed for own workforce/other third party appointments between providers on the Openreach network and between these workforces/other third parties and Openreach. We have decided not to publish this information on a provider-specific basis at this time as we do not consider that combining own workforce/other third party missed appointments with Openreach missed appointments calculated would allow for fair comparison of provider performance. In addition, we do not consider that presenting both an Openreach missed appointment rate and an own workforce/third party missed appointment for each individual provider would allow for a meaningful comparison for consumers.
- 1.38 While we have not published information on own workforce/third party missed appointments for those on the Openreach network on a provider-specific basis, we consider the information to provide a reliable indicator of sector-wide performance in aggregate and have therefore included this in our calculation for the total percentage of appointments missed across the sector.
- 1.39 Using the information supplied by providers on the Openreach network (BT, EE, Plusnet, Sky, TalkTalk³) we calculated an aggregate percentage of appointments missed by Openreach engineers for each month in 2016 and for the calendar year as a whole. There may be small differences between the metrics reported on here and Openreach's own published KPIs for 2016 because the information we are reporting only relates to the retail, residential customers of the providers included within the scope of the report, and has been derived from data held by the retail providers rather than obtained directly from Openreach.
- 1.40 We also calculated a percentage of appointments missed by Virgin Media engineers for the calendar year. The information supplied on whether an appointment is recorded as missed differs between Openreach and Virgin Media. Openreach appointments are recorded as missed if the engineer does not arrive within the specified slot or earlier than the agreed slot with the agreement of the customer. Virgin Media records an appointment as missed where the appointment did not take place on the agreed date because the engineer did not arrive in the agreed slot and an alternative slot could not be arranged on the day (either earlier or later than the agreed slot). As such, a direct comparison cannot be made between the information supplied for this metric and we have not sought to draw one in the report.

³ Post Office was unable to supply information on missed appointments in line with our requirements and their data was excluded from this analysis.

Customer service metrics (fixed and mobile services)

Metric vi): Percentage of customer contacts by contact method (landline and broadband providers, mobile providers)

- 1.41 We asked each provider to provide the percentage of total customer contacts accounted for by following contact channels: telephone, webchat, email/online contact form, letter, other. We asked that only inbound, customer-initiated contacts were included. The average percentages for fixed and mobile are a mean average of the percentages provided by each of the providers in those sectors.

Metric vii): overall average call waiting time

- 1.42 The overall average call waiting time given is the overall mean time in seconds customers spent in a call queue when they were waiting to get through to a call services agent on the contact system provided for new and existing residential fixed voice and fixed broadband customers. This includes calls made by those enquiring about or signing up to a new service.
- 1.43 This is calculated by dividing the total time that new or existing customers who spoke to a call services agent after making an inbound call spent in the call queue during the specified time period by the total number of inbound calls answered by call services agents in that time period.
- 1.44 Tesco Mobile provided information on average call waiting times for every call destination and each month in 2016 but did not hold information on an overall average call waiting time. In order to derive this, Ofcom used call volumes information supplied by Tesco Mobile for each month and call destination over 2016 to calculate the average call waiting time as per the definition specified in our original information request. For all other providers the figures presented are those supplied by providers in accordance with definitions specified by Ofcom.
- 1.45 The sector average waiting times were calculated by taking a mean average of providers' overall average call waiting time in each sector (landline & broadband, mobile).

Metric viii): average call waiting time by call destination - sales, retentions, technical support

- 1.46 We also asked providers to provide the average call waiting time by different destinations on the Interactive Voice Response (IVR) system, for example sales, billing and technical calls. To calculate the average call waiting time for sales, retention and technical calls across fixed providers, we mapped the relevant destinations and descriptions providers supplied onto these categories and calculated a mean time for each of these.

Metric ix): The percentage of customer calls 'abandoned'

- 1.47 To show the number of calls abandoned, we asked providers to supply the overall number of occasions where a customer abandoned the call while in a call queue waiting to speak to a call services agent as a percentage of total occasions customers were waiting in a call queue. The figures presented are those supplied by providers in accordance with definitions specified by Ofcom.
- 1.48 Tesco Mobile could not provide an overall percentage of calls abandoned and we therefore excluded them from this analysis.

- 1.49 The sector average abandonment rates were calculated by taking a mean average of providers' overall abandonment rates in each sector (landline & broadband, mobile).

Metric x): Issues resolved on first contact

- 1.50 The percentage of calls resolved in one contact is the percentage of calls made to each call destination for existing residential retail customers with enquiries about a fixed voice or fixed broadband service, where the same customer did not call back into the same call destination within the next 7 calendar days. This measure is commonly known as 'first contact resolution'. The figure presented is the mean calendar year percentage for those providers that were able to supply this information.