Review of BT's cost attribution methodologies

Second consultation

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Consultation

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About this document

BT is subject to regulatory financial reporting obligations. These have been imposed by Ofcom where BT has been found to have Significant Market Power in a relevant market.

In May 2014, we decided that BT's Regulatory Financial Statements should comply with a new set of guiding principles, which we called the Regulatory Accounting Principles. We explained that we would establish Regulatory Accounting Guidelines which will contain high level guidelines and accounting rules.

We explained that we would review BT's existing attribution rules against the new Regulatory Accounting Principles and that we would consult on the findings from this review alongside the Business Connectivity Market Review consultation, with the intention that any changes to the attribution rules would be reflected in any consequent price control.

In June 2015, we set out the initial findings from that review and invited stakeholders' views on if and how BT's existing attribution rules need to change. We also explained that more work was required to establish if some of BT's remaining cost attribution rules were appropriate.

This document sets out the results of that further review. It identifies some rules that we consider are not appropriate, makes proposals for further changes to BT's attribution methodologies and provides an estimate of the possible impact of those changes on the costs attributed to BT's regulated markets.

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Section 1

Summary

Overview and review so far

1.1 British Telecommunications plc ("BT") is subject to regulatory financial reporting obligations. These have been imposed by Ofcom where BT has been found to have Significant Market Power in a relevant market. These include obligations relating to accounting separation and cost accounting and include requirements to produce and publish annual regulatory financial statements (the Regulatory Financial Statements) and to maintain and publish certain accounting documents setting out how BT prepares those statements.

1.2 In May 2014, we introduced a new set of Regulatory Accounting Principles.[1] These provide a set of guiding principles to be followed in BT's Regulatory Financial Statements. We explained that we will also establish Regulatory Accounting Guidelines which will contain high level guidelines and accounting rules.[2]

1.3 We explained that we would review BT's existing attribution rules against the new Regulatory Accounting Principles. We explained that we would consult on the findings from this review alongside the Business Connectivity Market Review (BCMR), with the intention that any proposed changes to the attribution rules would, subject to consultation, be reflected in the market review and any consequent price control.

1.4 In June 2015, we published a consultation document setting out the initial findings from that review (the "June Consultation").[3] We identified some attribution methodologies that in our view did not comply with the Regulatory Accounting Principles and proposed changes to those methodologies. We provided estimates of the potential impacts of the proposed changes on the costs allocated to markets in the 2013/14 Regulatory Financial Statements.

1.5 We also identified some other attribution methodologies that needed further review and explained that we may return to these in a second consultation if we decided that the current rules are not appropriate.

1.6 Finally, we also identified errors that BT should correct and deficient supporting evidence and inadequate documentation that we expected BT to review.

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[1] The Regulatory Accounting Principles are, in order of priority: Completeness; Accuracy; Objectivity; Consistency with regulatory decisions; Causality; Compliance with statutory accounting standards; and Consistency of the Regulatory Financial Statements as a whole and from one period to another.
[2] The 2014 Statement followed a call for inputs of November 2011, a consultation in September 2012 (the "2012 Consultation") and a further consultation in December 2013 (the "2013 Consultation").
[2] http://stakeholders.ofcom.org.uk/telecoms/ga-scheme/specific-conditions-entitlement/market-power/fixed-access-market-reviews-2014/statement/
[3] Review of BT's cost attribution methodologies. Consultation 12 June 2015. http://stakeholders.ofcom.org.uk/consultations/cost-attribution-review/

This consultation

1.7 In this document, we focus on issues relating to inappropriate attribution methodologies. Specifically, we consider stakeholders' responses to the June Consultation that relate to our review framework, costs attributed using the Pay and Return on Assets methodology and the other methodologies on which we said we needed to carry out further analysis. In light of these responses, we:

- Consider the framework we proposed in June to determine whether the current attribution methodologies were inappropriate. We note that some stakeholders did not agree with our proposed framework. We explain why we still consider our proposed framework is appropriate;

- Review the proposals made in June and update some of our proposals for alternative attribution rules;

- Make new proposals in relation to other cost attribution rules; and

- Provide updated estimates of the impacts of our proposals.

Implications for costs attributed to regulated markets

1.8 In the June Consultation, we asked BT to estimate the impact of correcting the errors identified and asked Cartesian to estimate the possible impact of our proposals on the operating costs attributed to markets in the 2013/14 Regulatory Financial Statements. The estimates included in the June Consultation are included in Table 1.1.

Table 1.1 Initial estimate of impact of June proposals on operating costs attributed to markets in 2013/14 (£'m)

	Fixed access	Business connectivity	Narrowband	WBA 1 and 2	Residual
Correction of errors	(5)	(19)	(7)	(5)	36
Reattribution of overhead costs in AG112/AG103	(155)	(55)	(6)	(10)	226
Initial estimate of impact of June proposals	**(160)**	**(74)**	**(13)**	**(15)**	**262**

1.9 We explained that Cartesian's estimates were illustrative and subject to some important caveats. In particular, Cartesian modelled the impact of reattributing all the overhead costs in AG112/AG103 using a single attribution rule (based on previously allocated costs) as a proxy for the combined impact of the individual changes that we proposed in June. Also, Cartesian did not estimate the impact on Mean Capital Employed (MCE).

1.10 In Section 4 we explain our revised proposals for the attribution of costs included in AG112 and AG103 and present updated estimates of the impacts of our proposals. These estimates have been calculated at our request by BT. BT's estimates indicate that the effect of our revised proposals, including the correction of errors, is to reduce the impact on regulated markets from £262m to £204m, as set out in Table 1.2.

Table 1.2 Updated estimate of impact of June proposals on operating costs attributed to markets in 2013/14 (£'m)

	Fixed access	Business connectivity	Narrowband	WBA 1 and 2	Residual
Correction of errors	(5)	(19)	(7)	(5)	36
Reattribution of overhead costs in AG112/AG103	(122)	(36)	(4)	(6)	168
Updated estimate of impact of June proposals	**(127)**	**(55)**	**(11)**	**(11)**	**204**

1.11 In Section 4 we also propose alternative attribution rules for three further cost categories to which BT currently applies the Pay and Return on Assets methodology. In the following sections we propose alternative attribution methodologies for other cost categories (the November Proposals).

1.12 BT estimates that the total impact of the changes proposed in June and the further changes proposed in this document would be to remove £255m from regulated markets (including the correction of errors) in 2013/14. BT's estimates are set out in Table 1.3.

Table 1.3 Estimate of total impact of June and November proposals on operating costs attributed to markets in 2013/14 (£'m)

	Fixed Access	Business Connectivity	Narrowband	WBA 1 and 2	Residual
Updated estimate of impact of June proposals	**(127)**	**(55)**	**(11)**	**(11)**	**204**
November proposals Other costs using Pay and Return on Assets (Section 4)	(9)	(5)	(1)	(1)	15
Property (Section 5)	(30)	(1)	8	3	21
Electricity (Section 5)	7	0	7	(15)	1
Duct Valuation (Section 7)	(3)	2	0	0	0
Openreach and TSO software (Section 8)	(15)	(8)	1	8	13
Fibre GRC (Section 9)	0	0	0	0	0
Total	**(177)**	**(67)**	**3**	**(15)**	**255**

1.13 We also requested that BT estimate the total impacts of our proposals on its Mean Capital Employed. BT has estimated that the effect of our proposals would be to reduce the MCE attributed to regulated markets by £157m, as set out in Table 1.4. Reductions to MCE could reduce the costs reflected in regulated prices as these include an estimate of return on capital employed (based on our assessment of BT's cost of capital).

Table 1.4 estimate of total impact of November proposals on Mean Capital Employed (MCE) attributed to markets in 2013/14 (£'m)

	Fixed Access	Business Connectivity	Narrowband	WBA 1 and 2	Residual
Total	**(93)**	**(68)**	**18**	**(14)**	**157**

1.14 For the purposes of our final statement (and for assessing the impact of any of our final decisions for the Leased Lines Charge Control) we will require BT to calculate the impact of our decisions on its 2014/15 costs.[4]

Implications for the Leased Lines Charge Control

1.15 As explained in the June Consultation, these proposals may have implications for future charge controls that we might set as an outcome of our market reviews, including the BCMR, and subsequently the Fixed Access Market Review, to the extent that the proposed changes are reflected in the cost data used to inform these decisions.

1.16 Also in June 2015, we published a consultation document on our proposals for new charge controls on leased lines services (the 2015 Leased Lines Charge Control, or "LLCC" Consultation), as part of the BCMR. We are today also publishing a further consultation on the LLCC. The proposals for the LLCC rely on the analysis described in this document in relation to a number of proposed adjustments to BT's costs.

Next steps

1.17 We invite comments on our proposals in this document no later than 14 December 2015.

1.18 The close of this consultation is coincides with that of consultation on the LLCC.

[4] We note that in 2014/15 some services were moved from Wholesale Residual markets into regulated markets. As a result, the impact of our proposals on regulated markets in 2014/15 is likely to be greater, all else equal.

Section 2

Introduction

2.1 This is the second consultation on our review of BT's cost attribution methodologies.

2.2 In May 2014, we introduced a new set of Regulatory Accounting Principles. These provide a set of guiding principles to be followed in BT's Regulatory Financial Statements. We explained that we will also establish Regulatory Accounting Guidelines which will contain high level guidelines and accounting rules.

2.3 We explained that we would review BT's existing attribution rules against the new Regulatory Accounting Principles. We explained that we would consult on the findings from this review alongside the BCMR, with the intention that any proposed changes to the attribution rules would, subject to consultation, be reflected in the market review and any consequent price control.

2.4 In June 2015 we published our first consultation on the findings from that review. We explained that we had identified four types of issue relating to the way BT attributed its costs:

- Errors. We identified mathematical or input errors in spreadsheets and supporting calculations as well as allocation errors where costs had been allocated incorrectly (for example where costs had been allocated to a service that is not delivered using those costs).

- Inappropriate attribution methodologies. We noted that there are circumstances in which various ways of attributing costs may be appropriate, and that there may be arguments for supporting each of these different ways of attributing costs. We explained that BT remains responsible for the Regulatory Financial Statements and the cost accounting and accounting separation systems. We therefore rejected only those attribution rules which were clearly inappropriate. We identified some attribution methodologies (including methodologies relating to BT's General Overheads) that we considered were inappropriate because we did not consider that they appropriately reflected the activities that caused the costs to be incurred. Where we considered that current rules were not appropriate, we proposed what we considered to be appropriate cost attribution methodologies.

- Deficient supporting evidence. We explained that, in some areas BT may not be using the most objective and accurate source of data and that some of its supporting data and calculations were difficult to review and potentially not fit for purpose.

- Inadequate documentation. We identified aspects of the documentation published by BT to explain how the cost attribution system works that were unclear and not sufficiently transparent.

2.5 In respect of the inappropriate attribution methodologies, we:

- assessed the Pay and Return on Assets methodology used by BT to attribute certain general overheads in activity groups AG112 (Corporate Overheads) and AG103 (TSO Support Functions);

- explained that we considered the way BT attributes these costs was inappropriate and proposed changes to the attribution methodologies. We noted that BT uses a similar attribution methodology to attribute Openreach overheads (via a methodology called COMCOS) but we noted that more review was necessary before we could conclude whether this attribution methodology provides an appropriate basis for the attribution of these costs.

- assessed the methodologies used by BT to attribute sales of copper and property and proposed changes to the way BT allocated profit and losses of disposals of buildings; and

- identified other cost attribution methodologies on which we needed to carry out further analysis in order to assess whether or not they were appropriate.

2.6 In the June Consultation, we estimated the potential impact of the correction of errors and proposed changes relating to the Pay and Return on Assets methodology on the costs attributed to markets in the 2013/14 Regulatory Financial Statements. The estimates included in the June Consultation are included in Table 2.1.

Table 2.1 Initial estimate of impact of June proposals on operating costs attributed to markets in 2013/14 (£'m)

	Fixed access	Business connectivity	Narrow-band	WBA 1 and 2	Residual
Correction of errors	(5)	(19)	(7)	(5)	36
Reattribution of overheads in AG112/AG103	(155)	(55)	(6)	(10)	226
Initial estimate of impact of June proposals	(160)	(74)	(13)	(15)	262

2.7 We explained that these estimates were illustrative and were subject to some important caveats. Specifically, we explained that they were calculated using a model developed by our consultants, Cartesian, to simulate BT's cost attribution system and therefore the accuracy of the estimates was subject to the reasonableness of the simplifying assumptions made in the model and the accuracy of the input data provided by BT. We noted that one of the most significant limitations was that, to model the approximate impact of the proposed changes in aggregate, Cartesian modelled the impact of attributing all of these costs using a single attribution methodology (based on previously allocated costs) as a proxy for the combined impact of the individual changes. Also, Cartesian did not estimate an MCE impact.

Responses to the June Consultation

2.8 We received six responses to the June Consultation, from BT, Sky, TalkTalk, Virgin Media, Vodafone and UKCTA. BT also submitted consultants' reports. The responses are published at http://stakeholders.ofcom.org.uk/consultations/cost-attribution-review/?showResponses=true

2.9 We are currently considering stakeholders' responses to the June Consultation. We will take them into account in reaching our final decision on if and how BT's cost attribution methodologies need to change.

2.10 Nevertheless, in this consultation we consider those stakeholder responses that relate to our review framework, the attribution of costs by Pay and Return on Assets, and those other methodologies about which we said in June we needed to investigate further to assess whether or not they were appropriate.

Proposals considered in this document

2.11 In this document, we consider issues relating to inappropriate attribution methodologies. Specifically, we consider stakeholders' responses to the June Consultation and, in light of those comments, we:

- consider the framework we proposed in June to determine whether the current attribution methodologies were inappropriate. We note that some stakeholders did not agree with our proposed framework. We explain why we still consider our proposed framework is appropriate;
- review the proposals made in June and update some of our proposals for alternative attribution rules;
- make new proposals in relation to the other cost attribution rules; and
- Provide updated estimates of the impacts of our proposals.

Issues discussed in the June Consultation but not further considered here

2.12 BT has explained that it has corrected the errors identified in the June Consultation in its 2014/15 Regulatory Financial Statements.

2.13 In relation to supporting evidence BT has said that it does not agree that its data sources are not objective or accurate or that its models are not fit for purpose. It has also said that it continuously review its data sources and models with a view to continuous improvements in the structure and clarity of these data sources and models.[5]

2.14 With regard to inadequate documentation, BT has said that it has implemented our recommendations in its 2014/15 Accounting Methodology Documents and has included additional revisions to further improve the clarity and transparency to the reader.[6]

2.15 We will continue to work with BT to address the issues relating to supporting evidence and documentation. We do not consider these issues further in this document.

Structure of this document

2.16 In Section 3, we deal with stakeholders' responses relating to the proposed framework for our review. We provide further clarification of our approach and respond to stakeholders' comments on how we should apply the proposed approach in determining whether the current rules are appropriate.

[5] BT, June Consultation response, page 12, paragraph 25
[6] BT, June Consultation response, page 13, paragraph 26

2.17 In Section 4, we update our proposals relating to BT's use of the Pay and Return on Assets methodology to attribute certain overhead costs in light of stakeholders' responses and new information obtained since June. We explain why we continue to consider that the methodology does not provide an appropriate basis for attributing costs and we revise some of the proposals made in June. We also propose that this methodology is not appropriate for three additional cost categories (Openreach overheads, BT Wholesale software and Openreach software) that use it and propose changes to the way those costs are attributed in future. At the end of this section we provide updated estimates of the impact of these changes on the costs attributed to regulated markets.

2.18 In Section 5, we consider the way BT attributes costs in two categories (Property and Electricity) that we highlighted in the June Consultation required further review. We explain that we consider that the current attribution methodologies are not appropriate and should be changed. We propose alternative attribution methodologies and estimate the impact of these changes on the costs attributed to regulated markets.

2.19 In Sections 6 - 10 we consider those other attribution methodologies for which we said further work was required in June 2015:

- Section 6: Sales of property and copper
- Section 7: Duct Valuation
- Section 8: Openreach and TSO software
- Section 9: Fibre Gross Replacement Cost
- Section 10: Transfer Charges.

2.20 Where we consider the attribution methodologies to be inappropriate we propose alternative attribution methodologies and estimate the impact of these changes on the costs attributed to regulated markets. In Annex 5 we provide an estimated impact of the November Proposals at a market level.

2.21 In Section 11 we provide an update about how our proposals may be reflected in the LLCC decision and in BT's regulatory reporting requirements.

Impact assessment and EIA framework

Impact assessment

2.22 The analysis presented in this document constitutes an impact assessment as defined in Section 7 of the Communications Act 2003 ("the Act").

2.23 Impact assessments provide a valuable way of assessing different options for regulation and showing why the preferred option was chosen. They form part of best practice policy-making. This is reflected in Section 7 of the Act, which means that generally we have to carry out impact assessments where our proposals would be likely to have a significant effect on businesses or the general public, or when there is a major change in our activities. However, as a matter of policy we are committed to carrying out impact assessments in relation to the great majority of our policy decisions. For further information about our approach to impact assessments, see the guidelines, “Better policy-making: Ofcom's approach to impact assessment”, which are on our website.

Equality Impact Assessment

2.24 We are separately required by statute to assess the potential impact of all our functions, policies, projects and practices on race, disability and gender equality. EIAs also assist us in making sure that we are meeting our principal duty of furthering the interests of citizens and consumers regardless of their background or identity.

2.25 It is not apparent to us that the proposals that we set out in this document are likely to have any particular impact on race, disability and gender equality. Specifically, we do not envisage the impact of any outcome to be to the detriment of any group of society. Nor are we envisaging any need to carry out separate EIAs in relation to race or gender equality or equality schemes under the Northern Ireland and Disability Equality Schemes. This is because we anticipate that our regulatory intervention will not have a differential impact in relation to people of different gender or ethnicity, on consumers in Northern Ireland or on disabled consumers compared to consumers in general. Similarly, we do not consider that our proposals will have a particular impact on consumers in different parts of the United Kingdom or on consumers with low incomes.

Implications for the Leased Lines Charge Control

2.26 As explained in the June Consultation, these proposals may have implications for future charge controls that we might set as an outcome of our market reviews, including the BCMR, and subsequently the Fixed Access Market Review, to the extent that the proposed changes are reflected in the cost data used to inform these decisions.

2.27 Also in June 2015, we published a consultation document on our proposals for new charge controls on leased lines services (the 2015 Leased Lines Charge Control, or “LLCC” Consultation), as part of the BCMR. We are today also publishing a further consultation on the LLCC. The proposals for the leased lines charge controls rely on the analysis described in this document in relation to a number of proposed adjustments to BT’s costs.

Next steps

2.28 Responses to this consultation are due by 14 December 2015. The close of this consultation is intended to coincide with that of the Leased Lines Charge Control.

2.29 We will issue the directions setting out those requirements necessary for BT to make changes to its attribution methodologies alongside our decisions on the BCMR and LLCC.

Section 3

Review framework

Introduction

3.1 We set out our approach to this review in the June Consultation. We proposed that we should only change attribution methodologies that we considered to be clearly inappropriate by reference to the Regulatory Accounting Principles. Having carried out this assessment, we provisionally concluded that the way BT attributed some costs was clearly inappropriate and proposed changes to attribution methodologies.

3.2 As we explain below, not all stakeholders agreed with our approach.

3.3 In this section, we consider stakeholders' responses on our approach and set out that we believe our proposed approach remains appropriate, but also provide further clarification.[7] Specifically, we explain that our reference to clearly inappropriate methodologies does not mean that we will only propose changes where BT's attribution rule is very inappropriate but it means that we will propose changes when it is clear to us that what BT is currently doing is inappropriate.

3.4 We respond to stakeholders' detailed comments on specific proposals in the subsequent sections in this document.

The June proposals about our framework

3.5 In the June Consultation, we explained that we undertook a two-stage process. We explained that we first considered whether a particular cost attribution methodology was appropriate. Then, if we considered that was not the case, we moved to the second step in which we proposed an alternative attribution rule to be used instead.

3.6 We explained that BT should remain responsible for its Regulatory Financial Statements, the cost accounting and accounting separation systems. We noted that, in some cases, there may be more than one appropriate cost attribution basis. We therefore explained that we would only reject BT's attribution rules where they were clearly inappropriate. We explained that we would determine whether they were clearly inappropriate by reference to the Regulatory Accounting Principles.[8]

3.7 We identified some attribution methodologies that we considered were clearly inappropriate on this basis and proposed alternative cost attribution methodologies to be used instead.

[7] We comment on our approach to errors, supporting evidence and documentation in section 2, "Introduction".

[8] The new Regulatory Accounting Principles were introduced in our May 2014 Statement setting out our decisions on changes to BT's regulatory reporting requirements. We explained that, moving forward, BT's Regulatory Financial Reporting must comply with these Principles. http://stakeholders.ofcom.org.uk/consultations/bt-transparency/statement

Stakeholders' responses

3.8 Several stakeholders commented on the approach we applied to assess whether the current attribution rules were appropriate and if and how they should be changed. They focussed particularly on the proposed threshold of 'clearly inappropriate'.

3.9 BT did not challenge our proposed framework. It agreed that its cost attribution methodologies needed to be assessed against the Regulatory Accounting Principles and said that,

> "To fundamentally change the way in which corporate overheads are allocated to services and recovered through prices, would require Ofcom to show that the current methodology is inconsistent with the RAP. It is insufficient for it to show that there exists an alternative methodology that is superior. In any event, Ofcom has not demonstrated that an alternative methodology would be superior."

3.10 In addition, BT said that Ofcom is required to promote regulatory predictability by ensuring a consistent regulatory approach over appropriate review periods. BT noted that we had said in the 2014 Fixed Access Market Review Statement that adopting a consistent and predictable regulatory approach is important in order to support future investment. BT argued that this "clearly demonstrates how important consistency, predictability and investment incentives are in creating a market which can promote investment and innovation and create the predictable and stable environment that this requires".[9]

3.11 Finally, BT considered that our assessment was not sufficiently rigorous and that we did not demonstrate that the proposed alternatives were consistent with the Regulatory Accounting Principles.[10]

3.12 Sky said that it "agrees with Ofcom's proposed methodology".[11]

3.13 Other stakeholders did not agree. Virgin Media argued that we had gone beyond what is appropriate, while TalkTalk argued that we had not gone far enough.

3.14 Virgin Media said that, while it was "broadly in agreement with the scope and approach of the review" it had "principled and practical concerns about the proposed changes to the attribution methodologies that Ofcom labelled as "clearly inappropriate" and that "in defining a prescriptive set of attribution methodology changes, Ofcom has gone beyond what is necessary and appropriate". It argued that BT should be responsible for these choices and that Ofcom should confine itself to a review of the principles underpinning the methodologies and to providing guidance.[12]

3.15 Virgin Media noted that we had previously explained that we considered that responsibility for the preparation and accuracy of BT's regulatory financial data should remain with BT and argued that,

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[9] BT, June Consultation response, page 14, paragraphs 32 and 33,
[10] BT, June Consultation response, page 3, paragraph 14
[11] Sky, June Consultation response, page 1, paragraph 2
[12] Virgin Media, June Consultation response, page 2, paragraph 1.3 and response to question 4.1

> "The communications market is in a constant process of innovation and adaptation. In response, BT is likely to be continually changing the way it operates its network, uses its resources and manages its company; in establishing Ofcom's role as the arbiter of the most appropriate specific cost allocation methodologies it would appear to have adopted a material increase in the degree of regulatory cost attribution oversight. This is also a significant commitment of additional on-going resources required by Ofcom to undertake this task. In the context of the review, which found that BT's approach was free from bias, this appears heavy-handed".

3.16 On the other hand, TTG argued that "Ofcom has proposed that it should only reject (and over-rule) BT's attribution rules when they are 'clearly inappropriate'. We strongly disagree with this approach"[13] and argued that "there is no reason (legal or otherwise) we can see as to why Ofcom needs to set itself any hurdle (let alone a high one) before it can change BT's attribution approach".[14] It stated that "given that in a charge control situation Ofcom does not have to pass a 'clearly inappropriate' hurdle (or any other hurdle) in order to reject BT's approach we do not consider there is any need to pass a similar hurdle to reject BT's approach for deciding attributions in BT's RFS".[15]

3.17 It further argued that "Ofcom's approach grants BT some discretion in how costs should be attributed and the level of regulated charges. BT will use this flexibility to its advantage to overstate costs and inflate regulated wholesale charges."

Ofcom's response

3.18 As set out above, in the June consultation we proposed that as a first step in our assessment, we would consider whether BT's cost attribution methodologies are appropriate. We said that we would reject cost attribution methodologies that are clearly inappropriate.

3.19 Our use of the term "clearly inappropriate" was not to create a higher hurdle than that which we normally apply in adjusting BT's cost data (such as in the context of charge controls) by only proposing changes where BT's attribution rule is "very inappropriate". We referred to clearly inappropriate methodologies to emphasise that we would only propose changes where it is clear to us that BT's current attributions rules are inappropriate.

3.20 We did not propose to intervene where BT's current attribution rule is appropriate but we identified another appropriate rule which in our view is preferable. Hence, our approach has not been to look for methodologies that are simply "superior" to BT's current methodologies. We first established that the current methodologies are inconsistent with the Regulatory Accounting Principles. We then proposed alternative methodologies that we consider are consistent with the Regulatory Accounting Principles because they address concerns and shortcomings which we have identified in relation to BT's current methodologies. In so doing, we therefore demonstrated that the (consistent) alternative methodology is superior to the (inconsistent) current methodology.

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[13] TalkTalk, June Consultation response, page 6, paragraph 2.1
[14] TalkTalk, June Consultation response, page 2, paragraph 1.5
[15] TalkTalk, June Consultation response page 6, paragraph 2.5

3.21 We note BT's comment about ensuring that we adopt a consistent regulatory approach to promote regulatory predictability. We continue to believe, as we said in the 2014 Fixed Access Market Review Statement, that adopting a consistent and predictable regulatory approach is crucial in order to support future investment. However, we do not consider that fostering a consistent and predictable approach to regulatory financial reporting requires us to retain cost attribution rules that we consider to be inappropriate. Indeed, in our view we would undermine regulatory stability and consistency if we did not seek to address cost attribution rules that are inconsistent with our broader regulatory principles and framework.

3.22 We also note BT's comment that our assessment has not been sufficiently rigorous. The decisions we make following this Consultation process will be based on the information set out in the Cartesian Report, the June Consultation, this Consultation and stakeholders' responses to both Consultations (including the reports submitted to support their submissions) together with the information we have obtained throughout our Consultation on BT's regulatory reporting requirements, BT's Regulatory Financial Statements and its Accounting Documents and our ongoing work with BT's Regulatory Finance team. We are satisfied that we will be in a position to make informed regulatory decisions based on adequate evidence. To the extent that BT disagrees with our proposals, it should explain why.

3.23 We agree with Virgin Media that there are benefits in BT retaining responsibility for the preparation and accuracy of its Regulatory Financial Statements.

3.24 We concluded in our Regulatory Financial Reporting Decision that the Regulatory Financial Statements would remain BT's accounts. We said that while we would have a greater role in setting rules for preparation of the Regulatory Financial Statements (primarily through the change control process), BT would retain responsibility for producing the Regulatory Financial Statements in accordance with the Regulatory Accounting Principles and the Regulatory Accounting Guidelines, both determined by Ofcom.

3.25 We also agree that this review represents an increase in the degree of cost attribution oversight. However, we highlighted the need for this review in the Regulatory Financial Reporting Decision and consider that this review is an appropriate and proportionate response to the introduction of the new Regulatory Accounting Principles and the need for robust financial data to inform regulatory decisions.

3.26 We disagree with TalkTalk's argument that we should not limit ourselves to only rejecting inappropriate rules nor do we agree that the proposed approach is inconsistent with the approach we normally take in setting charge controls.

3.27 TalkTalk appears to acknowledge that we should not just change rules without a good reason. It notes that it is "not suggesting that Ofcom must reject all of BT's attribution rules but rather than it has the option to do so if it considers it justified". However, it does not explain how it considers we should assess whether changes to current rules could justified if not by reference to the appropriateness of those rules. As explained above, we consider that the question of whether an attribution rule is appropriate is a matter of judgement for us which we will make on a case by case basis.

3.28 Further, we do not agree with TalkTalk that in setting charge controls there is no hurdle for us in rejecting BT's approach to attributing costs. When we adjust BT's cost data, one of the issues which we consider is whether BT's data contains any error or inappropriate accounting methodologies. If it does, we make adjustments and justify our reasons for doing so which is our legal requirement. We may not have explicitly justified a particular adjustment using a term such as “inappropriate”, but in substance we adjust BT’s cost information where in our judgement there is an error or BT’s attribution rules are inappropriate. Our decisions in the last rounds of the Fixed Access and WBA market reviews illustrate this point.[16]

3.29 We also note that TalkTalk has not, as far as we are aware, identified any methodology changes that would or should be made absent the need for Ofcom to first establish that the current rule is inappropriate.

3.30 In addition, TalkTalk’s suggested approach of Ofcom (instead of BT) deciding on attribution of BT’s costs could mean that in due course we would in effect become responsible for preparation of the Regulatory Financial Statements. This would be inconsistent with our decisions in the Regulatory Financial Reporting Decision that BT should retain responsibility for producing the Regulatory Financial Statements in accordance with the Regulatory Accounting Principles and the Regulatory Accounting Guidelines, both determined by Ofcom.

3.31 Having considered stakeholders’ responses, we believe that our proposed approach remains appropriate. We therefore applied this approach in assessing and proposing changes to BT’s attribution methodologies in this Consultation.

3.32 We recognise however that our reference to the proposed threshold of ‘clearly inappropriate’ may have resulted in some confusion among stakeholders. To avoid any further confusion we simply refer to “inappropriate” methodologies in this Consultation.

[16] For example, in the 2014 Fixed Access Statement we made adjustments in relation to: (i) Group Overheads because we found that the relevant rule did not allocate costs such as ‘Strategy’, ‘Tax/Treasury’ and ‘Group Financial Control’ to overseas subsidiaries when it would have been reasonable to expect an element of the activity to be driven and consumed by overseas subsidiaries; (ii) TAMs costs because we considered that given that the TAM is an integral part of the provision of MPF rentals but is not used by WLR or SMPF rentals, TAMs costs should be allocated to MPF rentals only. In the 2014 WBA Statement we made for example an adjustment to SG&A broadband and ATM because we found that BT had allocated 2012/13 restated costs using forecast revenues and volumes instead of actual revenues and volumes, which we considered to be the appropriate basis for allocation.

Section 4

Pay and Return on Assets methodology

Summary

4.1 In June we said that we considered that the use of the Pay and Return on Assets (ROA) methodology to attribute costs from AG112 (Corporate Overheads) and AG103 (TSO Support Functions) was inappropriate.

4.2 BT also applies the Pay and ROA methodology to three further cost categories: COMCOS (Openreach overheads), AG409 (BT Wholesale general software) and AG410 (Openreach general software). We consider it is inappropriate to attribute the costs from any of these five categories using the Pay and ROA methodology because:

- Some of the costs attributed using the Pay and ROA methodology can be causally attributed;
- The Pay and ROA methodology does not take account of all information and does not provide an objective attribution methodology; and
- There are errors in the way BT has applied its Pay and ROA methodology.

4.3 Where costs from these cost categories can be associated with an activity that causes the cost to be incurred, we propose an attribution rule that reflects that activity. Where this is not the case, we propose to attribute costs from these cost categories using a 'previously allocated costs' (PAC) attribution rule. PAC includes current pay costs, non-pay costs and capital expenditure and, where relevant, it reflects the relevant line of business that these cost categories relate to (e.g. Openreach, TSO).

4.4 BT has estimated that our proposals will remove approximately £184m of operating costs from regulated markets in 2013/14.[17] This is lower than the £226m operating cost impact estimated by Cartesian and included in our June Consultation. The reasons for the change are explained at paragraph 4.351.

Background

4.5 BT attributes five categories of cost using either a Pay and ROA or a factorised Pay and ROA methodology.[18] The use of factorised pay rather than actual pay is a way of

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[17] Our proposals will also remove approximately £50m of MCE from regulated markets. Note that the impact on regulated markets depends on the services included in 'regulated markets' in the RFS. For example, in 2014/15 some services were moved from the Wholesale Residual market to the WLA market (see page 12 of BT's 2014/15 Methodology report). This will mean that when we present 2014/15 impacts in our statement, the impact on regulated markets could be greater (all else being equal), than the 2013/14 impacts presented here.

[18] BT has confirmed that these are the only cost categories that are attributed using the Pay and ROA methodology (BT response dated 4 September 2015, Q10).

attributing costs based on the number of employees within a line of business.[19] In this section we refer to these two methodologies collectively as the Pay and ROA methodology but we make clear where we are explicitly referring to the factorised pay variant. The five cost categories attributed using the Pay and ROA methodology are shown in Table 4.1.

Table 4.1: Cost categories attributed using the Pay and ROA methodology

Cost category	Description	2013/14 cost £m	Pay variant used in Pay and ROA
AG112	Corporate overheads	[✂] £500m to £1bn	Factorised pay
AG103	TSO Support functions	[✂] £100m to £150m	Actual pay
COMCOS	Openreach overheads	[✂] £50m to £100m	Actual pay
AG409	BT Wholesale general software	[✂] £10m to £50m	Actual pay
AG410	Openreach general software	[✂] £50m to £100m	Actual pay
Total		[✂] £500m to £1bn	

Note: AG stands for activity group, one of the cost category types used by BT (see section 3 of the June Consultation). AG112 uses BT Group factorised pay and BT Group ROA (excluding overseas operations). AG103 uses TSO pay and TSO ROA. COMCOS and AG410 use Openreach pay and Openreach ROA. AG409 uses Wholesale pay and Wholesale ROA.

4.6 BT defines the 'pay' element of the Pay and ROA methodology as both current (i.e. operating cost pay) and capitalised pay.[20] BT calculates the 'ROA' element by applying a cost of capital of 10.8%[21] to the CCA value of fixed assets in the relevant division.[22] The costs in these five cost categories are only attributed to BT's UK operations and not to BT's overseas operations.[23]

4.7 In our June Consultation we considered that it was inappropriate to attribute costs from AG112 and AG103 using the Pay and ROA methodology. We broke these two cost categories down into smaller cost categories and proposed alternative attribution rules that we considered were appropriate. In considering further the attribution of costs included in AG112 and AG103, we revise some of our June proposals, in

[19] Factorised pay takes account of the average pay in each BT line of business (e.g. Openreach, Global Services, etc). The effect of using factorised pay is to attribute costs to a line of business based on the number of employees in that line of business, and within that line of business costs are attributed on the basis of pay. Pages 378-379 of the Cartesian report give an example of using factorised pay.
[20] See for example page 128 of BT's 2014/15 DAM which describes AG112.
[21] BT's DAM says that the cost of capital of 10.8% is applied to the CCA value of the net book value of fixed assets (i.e. the net replacement costs or NRC). BT has told us that for AG112 the cost attribution system current applies the cost of capital to the closing balance sheet values rather than the mean value (25 September 2015, Q13).
[22] For example, for AG112 the relevant fixed assets are group-wide assets since the costs in AG112 are supposed to relate to group-wide corporate functions while for AG103 the relevant fixed assets are TSO-managed assets because the costs in AG103 are supposed to relate to TSO support functions.
[23] This is mainly relevant for AG112. BT's 2015 AMD says about the AG112 attribution that "*the final apportionment excludes subsidiaries and associates as these are overseas activities and the AG112 costs are being attributed solely to UK activities*".

particular in relation to insurance costs. In light of stakeholder comments, we also propose to modify the PAC attribution rule proposed in June so that it includes current pay, non-pay and capital expenditure.[24]

4.8 In relation to Openreach overheads (attributed using a methodology called COMCOS), we said in our June consultation that we would work with BT to gain a better understanding of these costs before assessing whether or not the attribution rule was appropriate or not.[25] We make this assessment in this consultation.

4.9 We did not discuss AG409 or AG410 in our June Consultation. However, since these cost categories are also attributed using the Pay and ROA methodology, we consider in this consultation whether or not it is inappropriate to apply the Pay and ROA attribution rule to AG409 and AG410.

4.10 This section is structured as follows:

- First we summarise what we said in June about the Pay and ROA methodology;
- Second we summarise the responses to our June Consultation;
- Third, we set out our response to the comments received and our proposals for this consultation, including an explanation of:

i) The background to BT's use of the Pay and ROA methodology;

ii) Why we consider the Pay and ROA methodology is inappropriate;

iii) The alternative attribution rules we are proposing; and

iv) The impact of our proposals. Following our instructions, BT has estimated that our proposals will remove approximately £184m of operating costs from regulated markets compared to our estimate of £226m in June (which was provided by Cartesian). We note that the June impact only included AG112 and AG103 while the impact presented here includes all five cost categories that use the Pay and ROA methodology.

What we said about the Pay and ROA methodology in June

4.11 In our June consultation we considered the Pay and ROA methodology as applied to AG112 (Corporate costs) and AG103 (TSO support functions).

4.12 We said that we did not consider that the Pay and ROA methodology provided an appropriate attribution basis because:

- Given the scale of the costs in these cost categories we would not expect a single allocation rule to provide the most objective or causal basis for allocating

[24] Where relevant the PAC definition reflects the relevant line of business, for example TSO in the case of AG103. In June, PAC included current pay, non-pay, depreciation, and transfer charges.

[25] June Consultation, page 72, paragraphs 8.141 to 8.147

these costs. We would expect to see different sub categories of costs with different cost drivers.[26]

- BT's choice of the Pay and ROA methodology indicates that BT considers that some of the costs are driven by people and some are driven by assets.[27]

- BT's use of the Pay and ROA methodology appears to be based on an assumption that on average all of these costs are caused equally by asset value and people rather than an assessment of all available data to determine the most appropriate attribution methodologies.[28]

- As it is possible to break these cost categories into smaller categories, we considered that the attribution rules should be determined on a more granular basis.[29]

4.13 In light of these points, we considered that it was inappropriate to apply the Pay and ROA methodology to AG112 and AG103.

4.14 We then proceeded to break down the AG112 and AG103 cost categories into more granular cost categories and for each of these we identified attribution rules that we considered complied with the regulatory accounting principles of causality and objectivity. Where we considered that costs could not be causally attributed we applied a PAC attribution rule. Table 4.2 shows the attribution rules that we proposed in June for AG112 and AG103, the amount of cost that we proposed attributing using each rule and the proportion of total costs from AG112 and AG103 that we proposed to attribute using that rule.

Table 4.2: Attribution rules proposed in June consultation, £m

Attribution rule	AG112	AG112	AG103	AG103
PAC	44%	[✂] £250m to £300m	44%	[✂] £50m to £100m
Employees	30%	[✂] £150m to £200m		
Pay	6%	[✂] £10m to £50m	39%	[✂] £10m to £50m
IT costs	12%	[✂] £50m to £100m	15%	[✂] £10m to £50m
Relevant revenue	3%	[✂] £10m to £50m		
Fleet costs	3%	[✂] £10m to £50m	2%	[✂] £0m to £10m
Property costs	2%	[✂] £10m to £50m		
Total	100%	[✂] £500m to £1bn	100%	[✂] £100m to £150m

Source: Ofcom, based on data from BT.

Responses to the June consultation on Pay and ROA

4.15 Stakeholder responses to the June Consultation focused on:

- Our proposal that the use of the Pay and ROA methodology was inappropriate; and

[26] June Consultation, page 57, paragraph 8.36
[27] June Consultation, page 57, paragraph 8.37
[28] June Consultation, page 57, paragraph 8.37
[29] June Consultation, page 57, paragraph 8.37

- Our proposals for alternative attribution rules.

Our proposal that the use of the Pay and ROA methodology was inappropriate

4.16 Vodafone, Sky and TalkTalk agreed that it was inappropriate to apply the Pay and ROA methodology to AG112 and AG103. Vodafone said that a single methodology should not be applied to a cost category if that category can be practically disaggregated into smaller categories with different cost drivers.[30]

4.17 Sky said that costs should be attributed in accordance with the activities that cause them to be incurred and where assumptions need to be made they should be justified and supported by empirical data.[31] Sky said that it was appropriate to attribute overheads on a more granular level along the lines proposed by Ofcom.[32]

4.18 TalkTalk said that "the attribution rules that BT used for corporate costs were unambiguously wrong. For example, BT attributed costs such as HR, communications, legal and IT partly based on assets (including duct assets) when evidently such duct assets did not cause these costs".[33] TalkTalk considered that "using assets to attribute was a crude tactic to attribute £100 millions of excessive costs onto regulated products".[34] TalkTalk agreed with our approach to break the AG112 and AG103 cost categories into more granular cost categories since, while there was no obvious attribution approach for the large cost category, suitable attribution rules can be identified for the smaller categories.[35]

4.19 BT did not consider that Ofcom had demonstrated that it was inappropriate to apply the Pay and ROA methodology to AG112 and AG103. BT's comments focused on the following themes:

- **There is no single correct way of apportioning overheads.** The attribution of overheads is complex and there are many possible attribution methods. Citing a 1991 academic paper by Eric Noreen[36] BT said that any attempt by Ofcom to apply a more cost causal methodology will be flawed because there may not be a cost causal relationship and some costs should be regarded as 'unattributable' with regards to cost causality. BT considered that most of the costs attributed from AG112 and AG103 were 'unattributable' with respect to causality, though it accepted that some of the costs could be causally attributed (e.g. insurance costs).

- **The Pay and ROA methodology complies with the RAP.** In relation to causality principle, BT said that its "methodologies are periodically reviewed by accounting consultants, economic consultants and systematically reviewed by both BT and the auditors of the RFS to ensure that the most appropriate cost

[30] Vodafone, June Consultation response, page 8,paragraph 3.4a
[31] Sky, June Consultation response, page 2, paragraph 2.3
[32] Sky, June Consultation response, page 2, paragraph 2.5
[33] TalkTalk, June Consultation response, page 1, paragraph 1.3, second bullet
[34] TalkTalk, June Consultation response, page 1, paragraph 1.3, second bullet
[35] TalkTalk, June Consultation response, page 7, paragraph 3.2
[36] *Conditions under which activity based costing systems provide relevant costs*, Eric Noreen, Journal of Management Accounting Research, Volume 3, number 4, 1991.

drivers are identified and cost attributions follow cost causality".[37] BT specifically referred to the 2013 Deloitte report which reviewed, amongst other things, the introduction of the Pay and ROA methodology to TSO overheads in AG103. Deloitte concluded that "the revised methodology reflects a stronger cost causal relationship than the previous methodology"[38] and that "the revised methodologies for TSO operating costs are consistent with the principles of cost allocation and cost recovery".[39]

- **Ofcom's arguments for why the Pay and ROA methodology is inappropriate are flawed.** Ofcom said in June that it was inappropriate to apply a single rule to a large value of costs. However, the appropriateness of a methodology should only be judged on its merits and not on the value of costs being attributed. Ofcom also said that BT's use of the Pay and ROA methodology indicates that some costs are driven by pay and others are driven by assets. BT said that any appropriate attribution base would need to aggregate different costs types, including operating and capital costs. BT said that a base that mixes staff and capital costs is appropriate since its corporate functions manage a business in which both people and assets are key. This does not mean that separate functions within its corporate overheads base manage either pay or assets separately.[40]

- **The Pay and ROA methodology has been previously challenged and upheld.** BT said that the Pay and ROA methodology had been in place for nearly 20 years and "has been challenged before by communications providers and has been both successfully defended by Ofcom and upheld by the Competition Commission, despite new methodologies being put forward".[41] BT referred in particular to Cable & Wireless' appeal of Ofcom's 2009 LLCC decision and Carphone Warehouse's appeal of Ofcom's 2009 LLU/WLR decision. BT said that Ofcom has not explained its reasons for departing from a methodology which Ofcom and the CC had endorsed in the past.[42]

4.20 BT accepted that some costs recorded in AG112, in particular insurance costs, may have more 'direct' cost drivers.[43] However, BT did not consider that this meant that the Pay and ROA methodology for overheads was inappropriate.

4.21 BT also said that any attribution of corporate overheads should include the cost of capital in the attribution rule. BT said that the inclusion of capital costs in calculations for the purposes of corporate cost recovery is a well-established principle.[44] BT said that the 10.8% cost of capital it used in its pay and ROA methodology was the cost of capital set by Ofcom for the purpose of its charge control models.[45]

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[37] BT, June Consultation response, Table on page 19. BT makes a similar comment in respect of the objectivity principle in the same table.
[38] Deloitte, BT RFS Attribution Changes, 15 October 2013, Table 34, page 47. http://www.btplc.com/Thegroup/RegulatoryandPublicaffairs/Financialstatements/2013/IndependentreviewbyDeloitteofBTRFSAttributionMethodologyChanges.pdf (2013 Deloitte report)
[39] 2013 Deloitte report, Page 49.
[40] BT, June Consultation response, page 13, paragraph 26, bullet 3.
[41] BT, June Consultation response, page 8, paragraph 11
[42] BT, June Consultation response, page 8, paragraph 13
[43] BT, June Consultation response, page 13, paragraph 26, bullet 1
[44] BT, June Consultation response, page 13, paragraph 26, bullet 4
[45] BT, June Consultation response, page 13, paragraph 26, bullet 4

4.22 Virgin also disagreed with Ofcom and considered that it was appropriate for BT to apply the Pay and ROA methodology to AG112 and AG103. Virgin said that it is "inherently challenging" to attribute overhead costs that reflect the principles of objectivity and causality since, "by their nature, these costs are not specifically attributable to activities that have a clear pathway to services".[46] Given that BT states that the activities undertaken by the functions included in AG112 and AG103 are the management of employees within the company and assets in the company to create a return, Virgin considered that it was appropriate that these costs are attributed using a Pay and ROA methodology. Virgin thought that to the extent these costs could not meaningfully be separated into coherent sub-pools of cost, the current basis appears objective.[47]

The definition of alternative attribution rules

4.23 TalkTalk said that it was not always clear how Ofcom defined the attribution rules it proposed. For example, TalkTalk asked whether previously allocated total costs included operating costs, depreciation and an allowance for cost of capital and whether AG103 was being attributed over TSO costs or BT Group costs.[48]

4.24 TalkTalk considered that where Ofcom had used a rule of 'total costs' to attribute certain overheads, it would be more appropriate to use capital expenditure rather than depreciation. TalkTalk said that this was because the effort from management and support functions is more likely to be associated with new asset purchases than the value of old assets, particularly assets such as duct which are likely to require very minimal input.[49]

4.25 TalkTalk also said that BT has an unfair advantage in responding to Ofcom's proposals since it can selectively propose alternative bases knowing which alternative will be favourable to BT.[50] In order to address this information asymmetry, TalkTalk requested that Ofcom publishes the impact of different approaches.

4.26 BT said that the PAC attribution rule should exclude those non-pay costs which are passed through to customers, such as payments to other operators (POLOs) and some equipment provided in managed contracts.[51] BT also said that PAC should exclude an attribution to overseas businesses that do not benefit from group functions.[52]

4.27 TalkTalk Virgin and BT also commented on the suitability of our proposed attribution rules for specific costs (e.g. attributing Group HR costs in AG112 using the number of employees). We have included these specific comments against the particular costs to which they relate later in this section.

4.28 Virgin said that "while there is merit in adjusting some methodologies to the approach suggested by Ofcom, Virgin Media is concerned by the use of [PAC] in a number of

[46] Virgin Media, June Consultation response, page 5
[47] Virgin Media, June Consultation response, page 6
[48] TalkTalk, June Consultation response, page 7, paragraph 3.6
[49] For example, TalkTalk response, paragraphs 3.32, 3.40, 3.42, 3.43
[50] TalkTalk, June Consultation response, page 7, paragraph 3.5
[51] BT, June Consultation response, page 21, paragraph 62
[52] BT, June Consultation response, page 21, paragraph 62

instances. This would result in making the attribution bases more opaque for these costs as compared to the previous approach".[53]

Ofcom response and proposals for this consultation

4.29 In this section we explain why, having considered stakeholders responses to the June Consultation, we consider it is inappropriate to apply the Pay and ROA methodology to each of the five cost categories listed in Table 4.1. We then set out our proposals for alternative attribution rules.

4.30 This section is structured as follows:

- We provide some background to BT's use of the Pay and ROA methodology for each of the five cost categories to which it is applied;
- We explain why we consider the Pay and ROA methodology is inappropriate; and
- We explain that some costs currently attributed using the Pay and ROA methodology can be attributed using rules to reflect causality while some costs cannot be causally attributed. We propose alternative attribution rules for each of these scenarios.

Background to the Pay and ROA methodology

4.31 We recognise that the Pay and ROA methodology has been used for many years. However, BT has applied this methodology to different types of cost and different amounts of cost over time. Table 4.3 summarises the cost that has been attributed from cost categories using the Pay and ROA methodology since 2007/08.

4.32 We understand that until 2012/13, the Pay and ROA methodology was only applied to the costs included in AG112 (Corporate costs). The methodology was applied to additional cost categories in 2012/13 and 2013/14 with the introduction of AG103 (TSO support functions), COMCOS (Openreach overheads), AG409 and AG410 (BT Wholesale and Openreach general software costs respectively). We provide further background on each of these categories below.

[53] Virgin Media, June Consultation response, page 6

Table 4.3: Cost categories attributed using the Pay and ROA methodology, £m

Cost category	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14
AG112	[✄] £400m to £450m	[✄] £500m to £1bn	[✄] £450m to £500m	[✄] £450m to £500m	[✄] £400m to £450m	[✄] £500m to £1bn	[✄] £500m to £1bn
AG103	-	-	-	-	-	[✄] £100m to £150m	[✄] £100m to £150m
COMCOS	-	-	-	-	-	[✄] £100m to £150m	[✄] £50m to £100m
AG409	-	-	-	-	-	-	[✄] £10m to £50m
AG410	-	-	-	-	-	-	[✄] £50m to £100m
Total	[✄] £400m to £450m	[✄] £500m to £1bn	[✄] £450m to £500m	[✄] £450m to £500m	[✄] £400m to £450m	[✄] £500m to £1bn	[✄] £500m to £1bn
% change yoy		46%	(22%)	(1%)	(7%)	113%	(0%)

Note that these are the costs recorded against these cost categories as at 'level 1' of BT's cost attribution system (see Section 3 of the June Consultation). Some of these categories, for example AG112, will pick up additional costs as other cost categories are exhausted. This means that the total cost eventually attributed from these cost categories may be higher than the amounts shown in the table.

AG112 (Corporate costs)

4.33 The amount of cost attributed via AG112 (Corporate costs) has varied over time as shown in Table 4.4. Over time, the majority of costs in AG112 have been associated with BT's corporate functions (OUC C) and BT TSO (OUC T, formerly BT Operate (BTO) and BT Innovate and Design (BTID). In 2009/10 a large amount of cost was also included from 'Group consolidation units' which BT told us mostly related to a 'regulatory provision'.[54]

[54] BT, response dated 15 September 2015 (Q34)

Table 4.4: Costs in AG112 by OUC

OUC	07/08	08/09	09/10	10/11	11/12	12/13	13/14
Corporate (C)	[✂] £250m to £300m	[✂] £300m to £350m	[✂] £250m to £300m	[✂] £250m to £300m	[✂] £350m to £400m	[✂] £350m to £400m	[✂] £350m to £400m
BT Operate (A)	[✂] £50m to £100m	[✂] £100m to £150m	[✂] £50m to £100m	[✂] £100m to £150m	[✂] £10m to £50m		
BTID (D)	[✂] £50m to £100m	[✂] £150m to £200m	[✂] £10m to £50m	[✂] £10m to £50m	[✂] £10m to £50m		
BT TSO (T)						[✂] £200m to £250m	[✂] £200m to £250m
Group consolidation (G)			[✂] £50m to £100m	[✂] £0m to £(10)m			
Other	[✂] £(10)m to £(50)m	[✂] £(10)m to £(50)m	[✂] £0m to £10m	[✂] £10m to £50m	[✂] £10m to £50m	[✂] £10m to £50m	[✂] £0m to £(10)m
Total	[✂] £400m to £450m	[✂] £500m to £1bn	[✂] £450m to £500m	[✂] £450m to £500m	[✂] £400m to £450m	[✂] £500m to £1bn	[✂] £500m to £1bn
% change yoy		46%	(22%)	(1%)	(7%)	49%	(5%)

Source: BT response dated 15 September 2015 (Q34). These are the costs at level 1 of the cost attribution system.

4.34 In recent years, the biggest change in the amount of cost recorded in AG112 came in 2012/13 when costs included in this category increased by c50% after the creation of BT TSO. Following the creation of BT TSO, BT reviewed the costs in BT TSO and included some of these costs in AG112.

4.35 BT has also included additional costs in AG112 over time. For example, in 2013/14 BT included Group Communications and Corporate Finance in AG112, having previously used a different attribution rule for these group functions. In a 2014 presentation to Ofcom, BT's auditors PwC said "we note that moving from a detailed analysis of costs to a more general support allocation does not result in an outcome with greater cost causality. Also we note that in recent periods the activities of the group corporate finance function have not been associated with any regulated market. However, the impact is not material".[55]

4.36 The variant of the Pay and ROA methodology applied to AG112 has also changed over time. Until 2011/12, AG112 was attributed based on actual Pay and ROA. In 2011/12 BT changed the attribution rule to factorised Pay and ROA. In a 2012 presentation to Ofcom, BT said that the change was made because the use of pay "biases costs towards [lines of business] with high cost per employee".[56] The effect of the change to factorised pay was to move more cost from AG112 into divisions with

[55] "BT regulatory financial statements: audit status and findings", 28 July 2014, slide 19.
[56] "Ofcom briefing on regulatory financial statements", 28 June 2012, slide 8.

relatively higher staff numbers; in particular Openreach. BT justified this change at the time on the basis of improved cost causality.[57]

AG103 (TSO support functions)

4.37 BT TSO was created in 2012/13 following the merger of two of BT's divisions: BT Operate (BTO) and BT Innovate and Design (BTID). Following a review of BT TSO costs, BT introduced AG103 in 2012/13 to capture costs associated with TSO support functions.

4.38 We understand that prior to the formation of TSO, overhead costs from BTO and BTID were attributed on the basis of either employee numbers or pro-rata to previously allocated costs.[58] Following the introduction of AG103, these TSO overhead costs were attributed using the Pay and ROA methodology (using TSO pay and ROA on TSO-managed fixed assets).

4.39 In its 2012/13 Reconciliation report[59], BT justified the change in attribution by reference to cost causality and consistency with the methodology it already used for AG112 (Corporate costs). The same report indicates that the impact of introducing AG103 alongside AG102 (TSO operational costs) was to add around £17m to regulated markets in 2012/13.[60,61]

COMCOS (Openreach overheads)

4.40 The COMCOS methodology was introduced in 2012/13; the same year as AG103 (TSO support functions).

4.41 BT's 2012/13 Reconciliation report says that Openreach overheads were previously attributed based on Openreach pay.[62] The introduction of COMCOS meant that Openreach overheads were attributed on the basis of Openreach Pay and ROA on Openreach fixed assets. BT justified the change by reference to cost causality and consistency, saying it "is more cost causal because it reflects the nature of these activities more accurately, recognising that some overheads are not only influenced by the number of employees but also the activities of running the business. The

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[57] "Ofcom briefing on regulatory financial statements", 28 June 2012, slide 8. This slide cites 'improved cost causality' as the reason for the change.

[58] For example, in its 2012/13 Reconciliation report, BT said that "*prior to the merger of BTO and BTID, BT took account of their various activities separately by using numerous different cost drivers, but there was a large amount of these costs that remained general and unspecified. These "fixed costs" were allocated pro-rata to costs with known drivers"* (page 32). Also, the 2013 Deloitte report for BT said that "*previously, BT TSO overheads were attributed on a pro rata basis in proportion to the costs of the groups supported*" (page 46) and that "*previously, the group corporate overhead costs incurred in BT TSO were attributed based on FTEs or previously attributed LoB pay costs*" (page 48).

[59] Each year BT publishes a reconciliation report in which it explains and justifies any methodology changes it has made during the year. The reconciliation report also includes an estimate of the impact of the change.

[60] BT 2012/13 Reconciliation report, page 18

[61] We note that the 2014 LLU WLR charge control used 2011/12 as the base year and not 2012/13. In that charge control we therefore did not include the 2012/13 methodology changes made by BT. We said at paragraph A22.39 of the charge control statement that "*we do not consider that our duties would be best achieved in the context of these charge controls by undertaking a detailed evaluation of each of these allocations".*

[62] BT 2012/13 Reconciliation report, page 31

methodology is also consistent with the treatment of corporate overheads."[63] BT estimated that the impact of this change was to add around £9m of cost to regulated markets in 2012/13.[64,65]

AG409 and AG410 (BT Wholesale and Openreach general software)

4.42 AG409 and AG410 were introduced in 2013/14. These two activity groups were introduced by BT as part of its transition to a new cost attribution system (moving from ASPIRE to REFINE). ASPIRE sometimes needed to be run multiple times in order to generate outputs[66] while REFINE was designed so that multiple runs were not necessary. BT explained that the introduction of these two activity groups helped reduce this requirement for multiple runs.[67]

4.43 As demonstrated by BT's 2014 Systems Reconciliation Report, the introduction of REFINE did not have a material impact on the costs reported in the RFS.[68]

Why we consider the Pay and ROA methodology is inappropriate

4.44 In considering whether an existing attribution rule is inappropriate we have regard to the Regulatory Accounting Principles. In June we said that the principles of Causality and Objectivity were particularly relevant in the case of the Pay and ROA methodology.[69] These principles are described below:[70]

- **Objectivity:** Each element of Regulatory Financial Reporting, so far as is possible, must take account of all the available financial and operational data that is relevant to that element. Where an element of Regulatory Financial Reporting is based on assumptions, those assumptions must be justified and supported by all available relevant empirical data. The assumptions must not be formulated in a manner which unfairly benefits BT or any other operator or entity, or creates undue bias towards any part of BT's or any other operator's business or product.

- **Causality**: Regulatory Financial Reporting must ensure that a) revenues (including revenues resulting from transfer charges) b) costs (including costs resulting from transfer charges); c) assets and d) liabilities are attributed in accordance with the activities which cause the revenues to be earned or costs to be incurred or the assets to be acquired or liabilities to be incurred respectively.

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[63] BT 2012/13 Reconciliation report, page 31
[64] BT 2012/13 Reconciliation report, page 18
[65] As per footnote 64, we note that the 2014 LLU WLR charge control used 2011/12 as the base year and not 2012/13.
[66] BT said that prior to the creation of these activity groups "*a number of the cost allocation excel models used 'loop back' data (data that was downloaded from a run of ASPIRE) to generate an output, which was then uploaded into a later ASPIRE run. These activity groups were created in order to remove this issue*". BT response dated 28 August 2015.
[67] BT response dated 28 August 2015 (Q30).
[68] BT's ASIG paper RA14-076 also estimates that the impact of introducing a number of new activity groups (including AG409 and AG410) to remove the need for multiple runs did not have a material impact on regulated market costs.
[69] For example paragraph 8.34, June Consultation
[70] Annex 3, 2014 Regulatory Financial Reporting Statement.

4.45 BT applies the Pay and ROA methodology to five different cost categories which themselves include costs related to a number of different functions. When BT has applied the Pay and ROA methodology to additional cost categories or types costs over time, it has in the past usually justified this change by reference to cost causality, as described in the previous sub-section.

4.46 However, in its response to the June Consultation, BT now argues that many of the costs attributed using the Pay and ROA methodology (focusing on AG103 and AG112 which were the subject of the June Consultation) are 'unattributable' with respect to causality; that is, it is not possible to identify a specific activity that causes the costs to be incurred.

4.47 BT nevertheless needs to establish an attribution rule for these costs. BT says that many of these costs "relate to all BT Group activities"[71], a comment echoed by FTI in its report for BT.[72] BT also says that "any appropriate attribution base for overheads would need to aggregate different costs types, including elements of capital and operating costs. We consider that a base that mixes staff and capital costs is an appropriate one as our corporate functions manage a business in which both people and assets are key."[73] In its Detailed Attribution Methodology BT says that corporate costs (recorded in AG112) are incurred as a result of "management of the employees within the company" and "management of the assets of the company to create a return".[74] Therefore, BT appears to consider that while it is not possible to associate these overheads with a specific activity, they can be said to be generally incurred as a result of all the activities undertaken by BT. The Pay and ROA methodology is based on the broad activities of i) managing/paying employees and ii) earning a return on the assets employed.

4.48 Where possible, costs in these five categories should be attributed according to the specific activities that caused them to be incurred during the year, in line with the causality principle.[75] We recognise that identifying specific activities is not straightforward and the degree to which a cost can be said to be caused by a particular activity may be difficult to assess. Indeed, BT has told us that little management information exists which could help attribute the costs from these five categories to particular lines of business or products.[76] However, as far possible, where evidence exists, or a coherent argument can be made, to associate a cost with a specific activity we consider that an appropriate attribution rule would reflect that relationship rather than defaulting to categorising the cost as one that cannot be associated with a specific activity and hence be causally attributed.[77]

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[71] BT, June Consultation response, page 15,Table at paragraph 36
[72] For example, paragraphs 61 and 71, BT, June Consultation response.
[73] BT, June Consultation response, page 13, paragraph 26, bullet 3
[74] 2013/14 Detailed Attribution Methodology, page 124. BT uses similar wording to justify the use of Pay and ROA methodology for AG103 on page 122 of the 2013/14 Detailed Attribution Methodology.
[75] For example, many of the costs in these five cost categories are pay or people-related costs (such as software, training and expenses) so it might be appropriate to attribute these costs using management information such as timesheets where that information indicated the activities, products or lines of business that these people had worked on during the year.
[76] BT response dated 28 August 2015 (Q22)
[77] For some costs it may be possible to identify a strong link between the costs incurred and a specific activity, for example, where the size of an insurance premium is directly affected by pay costs then there is a strong causal relationship between the activity of paying people and the size of insurance premiums. For other costs the link between a specific activity and the cost incurred may be weaker,

4.49 Nevertheless, we understand that it may not be possible to associate all of the costs in these five categories with specific activities.[78] However, as explained below, we do not consider that it is appropriate to attribute such costs using the Pay and ROA methodology.

4.50 We have undertaken a review of the costs attributed using the Pay and ROA methodology and we consider that it is inappropriate to apply the Pay and ROA methodology to each of the five cost categories for the following reasons, which we expand on below:

- Contrary to BT's view that costs in these categories[79] are 'unattributable', we consider that some of the costs attributed using the Pay and ROA methodology can be causally attributed;

- The Pay and ROA methodology does not take account of all information and does not provide an objective attribution methodology for 'unattributable' costs; and

- There are errors in the way BT has applied its Pay and ROA methodology.

Some of the costs attributed using the Pay and ROA methodology can be causally attributed

4.51 The Pay and ROA methodology is applied to a large amount of costs –around [✂£500m to £1bn] in 2013/14 (see Table 4.1). We agree with BT that the scale of the costs attributed using the Pay and ROA methodology is not in itself a reason to consider it inappropriate. However, given the scale of costs and range of different types of cost attributed using this methodology we consider that it is appropriate to review them to assess whether or not some could be causally attributed; our review concludes that some costs can be causally attributed.

4.52 While we accept BT's argument that it is not always possible to causally attribute these costs, following a detailed review of the costs currently attributed using the Pay and ROA methodology we consider that there are some costs for which a causal attribution can be identified. In other words, for some costs it is possible to identify specific activities on which to base the attribution rule.

4.53 All respondents to our June consultation to some degree agreed that if appropriate activities could be identified then the cost attribution rule should reflect those

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for example, the activity of employing and paying people results in HR costs being incurred, even though changes in the number of people employed may not have an immediate impact on HR costs. In this case a coherent argument can be made to associate the activity and the cost incurred.

[78] We recognised this in our June consultation where we proposed to use a previously attributed costs ("PAC") methodology where causality could not be identified. For example, in relation to Group Finance costs recorded in AG112 we said "*we consider that the costs of the group finance team are more closely linked to all the activities of BT Group*" (paragraph 8.71). We made a similar comment about the costs of other teams included in AG112, e.g. CIO for Group, Corporate Communications and Group Legal.

[79] While BT's comments focused on AG112 and AG103 since these were the categorises consulted on in June, we consider that its comments would also apply to the other cost categories to which it applies the Pay and ROA methodology, since BT's rationale for applying the Pay and ROA to different categories is similar, if not identical (for example, we said in paragraph 4.41 that it applied the methodology to COMCOS to be consistent with AG112).

activities. Where this is the case we consider it is inappropriate to apply the Pay and ROA methodology because this would not reflect the activities associated with that cost in breach of the Causality principle. Later in this section we propose alternative attribution rules, but Table 4.5 shows the percentage of costs currently attributed using the Pay and ROA methodology that we propose can be causally attributed following our review.

Table 4.5: Percentage of costs that we propose can be causally attributed, 2013/14

	AG112	AG103	COMCOS	AG409	AG410
Causal attribution	33%	63%	48%	0%	37%
Non-causal attribution (PAC)	67%	37%	52%	100%	63%

Note: The percentages apply to 2013/14 only.

The Pay and ROA methodology does not take account of all information and does not provide an objective attribution methodology for 'unattributable' costs

4.54 We agree with BT that it is not always possible to causally attribute costs from these five categories because it may be difficult to identify specific activities that caused the costs to be incurred. In such cases, we consider that an objective attribution rule would need to take account of all available information and we consider that such a rule could i) attribute these costs across all of BT Group's activities or ii) attribute these costs in proportion to those that can be causally attributed.

4.55 BT's Pay and ROA methodology does not appear to achieve either of these aims because i) it does not reflect all of BT Group's activities and ii) it attributes a significantly greater share of costs to regulated services than might be expected if the costs were attributed in proportion to those that can be causally attributed.

4.56 The Pay and ROA methodology does not reflect all of BT Group's activities because it excludes non-pay costs. Non-pay costs include operating costs associated with, for example, property, contractors, television production costs and sports rights costs. In 2013/14 non-pay costs were higher than pay costs ([✂ £5bn to £5.5bn] compared to [✂£4bn to £4.5bn]), including the impacts of payments to other operators. We therefore consider that the Pay and ROA methodology does not represent all BT Group's activities because it excludes non-pay costs; a category that includes many of the activities undertaken by BT during the year, activities which therefore do not pick up a share of the costs from these five cost categories.

4.57 We have considered what percentage of costs might be attributed to regulated markets if the costs in these five categories were attributed in proportion to costs that can be causally attributed. If the costs in these five categories were the only costs that could not be causally attributed then we might expect the proportion of costs attributed to regulated markets to be similar to the overall percentage of costs attributed to regulated markets in the Regulatory Financial Statements. In 2013/14 we estimate that BT's regulated activities earned less than a quarter (23%) of BT Group's revenues[80] while they attracted around 20% of operating costs (excluding

[80] Including group eliminations. Excluding eliminations the percentage is 29%.

depreciation) and 29% of costs on a FAC basis.[81] On this basis we might expect that attributing the costs from these five categories in proportion to costs that can be causally attributed would lead to 20-30% of costs being attributed to regulated markets. However, the Pay and ROA methodology attributes more than half (53%) of the "unattributable" costs to regulated markets.

4.58 An attribution rule that excludes non-pay costs tends to attribute more costs to regulated markets because the proportion of non-pay costs that relate to regulated markets is typically lower than the equivalent proportions for pay costs and capital costs. For example, in 2013/14, a group-wide[82] attribution rule based on pay or factorised pay would have attributed 28-32%[83] of costs to regulated markets[84] while a rule based on non-pay would have attributed around 9% of costs to regulated markets.[85] This is illustrated in Table 4.6.[86]

Table 4.6: Attribution of costs using different group-wide bases

	'Operating costs'			'Capital costs'			For context	
Market	Pay	Factorised pay	Non-pay	CCA depn	ROA	Capex	Pay and ROA	Revenue
Regulated	28%	32%	9%	51%	71%	47%	53%	23%[87]
Unregulated	72%	68%	91%	49%	29%	53%	47%	77%

Note: These percentages include an allocation of costs to all of BT, including overseas operations while the existing Pay and ROA methodology does not attribute to overseas operations. The percentages are also reported before any of the adjustments considered below (e.g. non-pay includes POLOs and software credits; however, it does exclude operating income due to the way BT modelled the impacts). ROA is estimated using a 10.8% cost of capital which is what BT currently uses in its Pay and ROA methodology. Pay is operating cost pay plus capitalised pay; the ratio for current pay only is 23%/77%.

BT has made errors in the way it applies the Pay and ROA methodology

4.59 As well as our concerns about the use of an attribution rule based on Pay and ROA in principle, we also have concerns about the way BT has applied this methodology

[81] FAC stands for fully allocated costs. This is derived as CCA operating costs plus a return on capital employed. For this purpose we have used an illustrative cost of capital of 10% applied to the MCE reported in the Regulatory Financial Statements.
[82] Costs in AG112 relate to group-wide costs as opposed to being specific to a particular line of business.
[83] As explained above, BT amended the Pay and ROA methodology applied to AG112 in 2011/12 so that it used factorised pay rather than pay. We note that factorised pay attributes more costs to regulated markets than actual pay.
[84] Note that the products included within regulated markets can change from year to year. These figures are therefore indicative for 2013/14 only.
[85] Before taking account of non-pay adjustments, such as POLOs, discussed later in this section. Following these adjustments the percentage of non-pay costs associated with regulated markets increases from 9% to around 14%.
[86] The proportions in Table 4.6 are relevant for a group-wide attribution rule. The proportions would be different for line of business-specific attribution rules (e.g. TSO or Openreach), but the proportion of non-pay costs associated with regulated markets would remain lower than the corresponding proportion for either pay or capital costs.
[87] This is derived from the 'total SMP markets' revenue reported on page 23 of the 2013/14 RFS of £5,250m as a proportion of the 'total markets' revenue of £23,206m.

in practice relating to i) including capitalised pay twice and ii) using an incorrect cost of capital .

4.60 The ‘pay’ element of the Pay and ROA methodology is composed of both current (operating cost) pay and capitalised pay. However, capitalised pay is also included in the ‘ROA’ element since ROA is calculated by multiplying the fixed asset base (which includes capitalised pay) by a cost of capital of 10.8%. Therefore the Pay and ROA methodology includes capitalised pay relating to the current year twice. While we consider that capitalised pay could reasonably be included in an attribution rule attempting attribute the costs from these five categories, we consider that it should only appear once in the attribution base. Since capitalised pay tends to attribute more cost to regulated markets than current pay, including it twice in the attribution rule risks creating a bias towards attributing costs to the regulated markets[88] and we therefore consider it breaches the Objectivity principle.

4.61 In relation to the 10.8% cost of capital used by BT to estimate the ‘ROA’ element, BT says that this cost of capital is set by Ofcom.[89] However, for a number of years Ofcom has set different costs of capital for different parts of BT’s business,[90] and the cost of capital used by BT in the Pay and ROA methodology does not reflect these different costs of capital. For example, BT uses a 10.8% cost of capital to attribute costs to Openreach copper access products rather than the 8.6% Openreach copper access cost of capital most recently determined by Ofcom. Including a cost of capital that is higher than the current Ofcom rate for BT Group appears to give too much weight to the ROA element of the attribution rule (which attributes a higher proportion of costs to regulated markets than the Pay element). Applying the average BT Group rate to calculate the return on Openreach copper access assets, rather than the (lower) Openreach copper access rate also increases the proportion of costs that are attributed to regulated markets.

4.62 Therefore even if it was appropriate to attribute the costs from these five categories using a rule that included ROA, we consider that the cost of capital applied by BT to calculate ROA for these purposes is inappropriate. Further, while not an error, we note that if it was appropriate to include ROA in an attribution rule, there is a question about which asset valuation to use to calculate ROA. The asset base could be based on historical costs, current costs or, in the case of duct, on a RAV basis, and each of these measures would lead to a different attribution of costs.[91]

[88] For example, in 2013/14 a group-wide attribution base would attribute 23% to regulated markets using current pay and 28% using current and capitalised pay. This implies that the proportion of capitalised pay relating to regulated markets is higher than for current pay.

[89] BT, June Consultation response, page 13, paragraph 26

[90] For a number of years Ofcom has estimated a cost of capital for BT Group, Openreach copper access the ‘Rest of BT’, though in the 2015 LLCC consultation we also propose a further cost of capital for ‘other UK telecoms’. The most recent decision in the 2014 LLU WLR Statement estimated pre-tax nominal costs of capital of 10.0%, 8.6% and 10.8% for BT Group, Openreach copper access and Rest of BT respectively. Although the current Rest of BT cost of capital has been determined as 10.8% we understand that it is a coincidence that this is also the rate used by BT in the Pay and ROA methodology. We consider it is more likely that BT’s use of a 10.8% cost of capital (which it has used for a number of years) derives from Ofcom’s 2005 statement “Ofcom’s approach to risk in the assessment of the cost of capital”, from which a BT Group cost of capital of 10.8% can be derived.

[91] For example, the attribution of costs using a ROA based on a CCA valuation methodology could depend on valuation differences year to year affecting the input price of assets such as copper, fibre and duct.

Provisional conclusion on whether the Pay and ROA methodology is inappropriate

4.63 For the reasons set out above, we consider that it is inappropriate to attribute costs with no causality from these five cost categories using the Pay and ROA methodology.

4.64 BT has argued that this provisional conclusion is incorrect because Ofcom has come to different conclusions in the past. Regardless of the decisions we took in different circumstances in the past, we consider that our provisional conclusion is appropriate given the detailed review of costs undertaken as part of this consultation and the framework set out above. However, in the following section we respond to BT's argument that the Pay and ROA methodology has previously been challenged and upheld.

Whether the Pay and ROA methodology has previously been challenged and upheld

4.65 Where Ofcom has set charge controls based on costs derived from BT's RFS then the cost base used to set prices will have included some costs that had been attributed using the Pay and ROA methodology.

4.66 However, not all charge controls have been set based on costs derived from BT's Regulatory Financial Statements. BT refers to two charge controls in particular which were appealed to the CAT and considered by the Competition Commission (CC): Carphone Warehouse's (CPW's) appeal of the 2009 LLU WLR charge control and Cable & Wireless' (CWW's) appeal of the 2009 LLCC. BT says that the Pay and ROA methodology was defended by Ofcom and upheld by the CC in these appeals. As set out below, we disagree that the CC has upheld the Pay and ROA methodology. We recognise that Ofcom accepted the use of the Pay and ROA methodology in the past but we do not consider that it follows that this methodology must be considered appropriate against the new Regulatory Accounting Principles in perpetuity.

<u>The CC has not previously upheld the Pay and ROA methodology</u>

4.67 The 2009 LLU charge control was based on cost data from BT's 'Oak' model rather than costs reported in BT's Regulatory Financial Statements.[92] Corporate costs in the Oak model were attributed to Openreach on the basis of full time employee (FTE) numbers and not on the basis of the Pay and ROA methodology. Unlike the 2009 LLU charge control, the 2009 LLCC was based on costs derived from BT's Regulatory Financial Statements. However, the issues raised in the 2009 LLCC appeal did not concern the suitability of the Pay and ROA methodology itself.[93,94]The CC did not have to decide whether or not the Pay and ROA methodology was

[92] CC Determination of LLU WLR appeal, Paragraph 2.443. The Oak model was developed internally by Openreach to forecast unit costs for services subject to charge controls. See also paragraph 2.543 of the CC Determination of LLU WLR appeal.
[93] One of the appeal points was that Ofcom erred in adopting a methodology that did not allocate corporate overheads to any of BT's overseas operations.
[94] 2009 LLCC Statement, paragraph A6.18

appropriate in either of these two appeals. We therefore disagree with BT that the CC upheld the Pay and ROA methodology.

Ofcom's previous acceptance of the Pay and ROA methodology

4.68 As noted above, where Ofcom set charge controls based on costs derived from BT's RFS, the cost base used to set prices would have included some costs that had been attributed using the Pay and ROA methodology. However, the fact that we accepted this methodology in the past does not mean that we are required to retain that view, in particular where on further and more detailed assessment of how the Pay and ROA methodology is applied by BT at present we consider that it is inappropriate.

4.69 In the next section we review the costs currently attributed using the Pay and ROA methodology. We explain that some of these costs can be causally attributed while other costs cannot be causally attributed. We propose alternative attribution rules for each of these scenarios.

Review of costs attributed using the Pay and ROA methodology

4.70 Having concluded that the Pay and ROA methodology is inappropriate we set out in this section our review of the costs currently attributed using the Pay and ROA methodology.[95]

4.71 Where we consider that costs can be associated with specific activities we propose an attribution rule that we consider represents that relationship.

4.72 Where we consider that costs have no causality we consider that the attribution rule should provide an objective basis for apportioning costs across BT's markets and services.

4.73 We set out above that we consider an objective attribution rule for costs with no causality could attribute such costs across all of BT Group's activities or in proportion to those costs that can be causally attributed. We have therefore looked for an attribution rule that reflects the way other costs have already been attributed within BT's cost attribution system and, in deciding which costs to include in this rule, we have tried to reflect the activities of BT. As explained below, we consider that this is best achieved using a methodology based on PAC, although, in light of stakeholder comments, we have revised our definition of PAC.

4.74 We recognise that there are different ways of measuring BT's activities and these could have implications for the costs to include in an appropriate attribution rule. For example, if it was appropriate to measure BT's activities by reference to what its employees worked on an attribution rule based on pay might be used while if it was appropriate to measure BT's activities by reference to what it spent its money on then a rule based on total expenditure might be used. Further, a broad measure of 'BT's activities' is likely to include capital costs and this raises the question of whether the

[95] We note that some costs may have elements of causality and no causality. For example, Group Finance may only do work for UK subsidiaries such that there is a causal relationship between the activity of operating in the UK and incurring Group Finance costs. However, it might not be possible to identify specific UK activities that cause the Group Finance costs to be incurred such that within the UK the Group Finance costs would be attributed using our PAC definition.

attribution rule should take account of the amount spent on assets during the year or a measure of the value of the existing asset base.

4.75 In deciding which costs to include in our PAC attribution rule, we propose that it is appropriate to consider BT's activities during the year. As explained below, one of the effects of this is that we consider that PAC should include capital expenditure incurred during the year rather than measures associated with the value of the existing asset base such as depreciation and ROA.

4.76 Before setting out our detailed review of the costs included in the five cost categories that are currently attributed using the Pay and ROA methodology, we set out the PAC attribution rule that we propose to apply to costs with no causality.

The proposed attribution rule to apply to costs with no causality

4.77 We have set out above that we consider it would be reasonable to treat costs with no causality from these five categories as if they were associated with all the activities of BT during the year.

4.78 BT has previously attributed some costs from these five cost categories using pay costs or a similar people-related measure.[96] However, we consider that pay costs alone might not necessarily capture all the 'activities' undertaken by BT, especially where the activity requires a number of inputs in addition to pay, such as other operational costs or expenditure on assets. We therefore consider it is appropriate to take a broader view of the 'activities' of BT and to attribute costs with no causality using a rule that reflects what BT has spent its money on during the year.

4.79 On this basis we have considered the pay, non-pay and capital costs that should be included in an attribution rule that reflects the amount of money spent by BT during the year. Our starting point is the previously allocated costs (PAC) attribution rule that we proposed in our June Consultation. Our June PAC proposal included current pay costs, non-pay costs, current cost depreciation and transfer charges. In addition, since our June PAC proposal applied to all of BT's costs, we did not differentiate by line of business (e.g. Openreach, TSO) or overseas operations. We consider each of these elements below.

Pay costs

4.80 In order to reflect the amount spent by BT during the financial year we consider that current pay costs should be included. No respondent commented on the inclusion of pay costs in our June PAC proposal.

4.81 We have considered whether the attribution rule should refer to pay or factorised pay costs. An attribution rule based on pay would attribute costs based on the actual pay costs included in the relevant cost categories while a rule based on factorised pay would first take account of the number of employees within a line of business and then attribute costs within that line of business using actual pay costs.

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[96] For example, as explained above, some Openreach overheads were previously attributed using Openreach pay and some TSO costs were previously attributed using FTEs.

4.82 BT currently uses factorised pay in the attribution of AG112[97] and actual pay in the attribution of the other four cost categories using the Pay and ROA methodology. If BT considers that these cost categories are all composed of costs with no causality, it is not clear why some of the costs are attributed using factorised pay and some using actual pay. We consider that a single attribution rule should be applied consistently to each of these cost categories as the purpose of this rule is to attribute costs for which no causality can established. We do not consider it would be desirable or justified to have different versions of this attribution rule for these five cost categories.

4.83 We consider that actual pay costs would better reflect the amount of money BT has spent during the year and therefore propose to include actual pay costs in our PAC attribution rule.

Non–pay costs

4.84 Non-pay costs include operating costs associated with, for example, property, contractors, television production costs and sports rights costs. We consider that such non-pay costs represent amounts spent by BT during the year and propose to include them in our PAC attribution rule.

4.85 BT said that the PAC attribution rule should exclude those non-pay costs which are passed through to customers, such as payments to other operators (POLOs) and some equipment provided in managed contracts.[98]

4.86 BT separately accounts for POLOs and in 2013/14 POLOs made by BT amounted to £2.5bn, close to half of BT's non-pay costs or 15-20% of its total operating cost base.[99] These POLOs represent payments to UK and overseas operators to terminate services on other networks. BT makes these payments in two circumstances:

- Calls originate on BT's network but terminate on another network.
- Wholesale voice transit, where calls originate on another network, pass through BT's network, and terminate on another network.

4.87 In both cases we agree with BT that POLOs are a pass through cost. For example, when BT provides wholesale voice transit services, the originating operator can either choose to be billed directly by the terminating operator, or it can choose for BT to pay the terminating charge and then make the corresponding payment to BT.

4.88 We do not consider that the size of POLOs is proportionate to the activities involved in passing these receipts through and we therefore agree with BT that non-pay costs should exclude POLOs.[100]

[97] As explained above, BT started to attribute AG112 using factorised pay in 2011/12 when previously it had used a pay basis.
[98] BT, June Consultation response, page 21, paragraph 62
[99] FTI, Report for BT on Ofcom's June Consultation. Paragraph 6.11 of the FTI report says that in 2014/15 POLOs amounted to £2.4bn or 17% of BT's total operating costs.
[100] At this stage BT has not provided any evidence of the 'equipment provided in managed contracts' that it mentions in its response.

4.89 In the course of modelling the impact of our proposals with BT we also discovered that non-pay costs include 'negative costs' associated with i) operating income associated with, for example, scrap copper recovery and repayment works and ii) capitalisation credits associated with, for example, software costs that are initially recorded as an operating cost in TSO but are capitalised when they are attributed to other divisions such as Openreach.

4.90 For the purposes of attributing overheads, we do not consider that non-pay costs should include either of these items because they do not represent amounts spent by BT (and we assume the amount spent by BT represents the activities it undertakes). In relation to other operating income, the amount spent by BT is the cost of the underlying activity (e.g. recovering scrap copper) and not the revenue generated from that activity. In relation to capitalisation credits, the amount spent by BT is represented by the (positive) amount capitalised on the balance sheet and not the (negative) amount of the corresponding credit in non-pay costs.

4.91 We therefore propose that the non-pay costs included in our PAC attribution rule should exclude POLOs, other operating income and capitalisation credits.

Capital costs

4.92 In order to reflect the amount of money spent by BT during the year, we propose to include capital expenditure in our PAC attribution rule. In June, our proposed PAC attribution rule included depreciation. However, we agree with TalkTalk that it is more appropriate to include capital expenditure in the attribution rule. Depreciation (like ROA) is affected by purchases of assets in the past, and for the reasons given above, we consider that the activities of BT are appropriately represented by the amount of money spent by BT during the year, which, in terms of capital costs, is reflected by capital expenditure rather than depreciation or ROA.

4.93 We also note that the practical issues we identified with ROA above (associated with asset valuation and the choice of cost capital) do not apply when using capital expenditure.

4.94 BT said that the attribution rule for costs with no causality should include the cost of capital (ROA) and agreed with FTI who said that PAC is a "form of Equi-Proportionate Mark Up ("EPMU") for recovery of common costs, often applied in long run incremental cost (LRIC) costing methodologies" and that an EPMU allocation methodology should include the cost of capital for three reasons:[101]

- "In principle an EPMU approach allocates all attributable (or previously allocated) costs first, and then allocates 'unattributable' costs in proportion to the attributed costs. Many capital costs are attributable, and typically follow depreciation costs. An EPMU methodology which allocated unattributable costs on the basis of only a portion of previously allocated costs would, by definition, not be a true EPMU approach".

- "Excluding the cost of finance would lead to distorted cost and price signals. In particular, the amount of overheads BT would be able to recover on a particular asset or service would depend on whether or not the asset was purchased or leased. If capital costs were excluded from the EPMU allocation base, the

[101] FTI, Report for BT on Ofcom's June Consultation, page 60, paragraphs 6.22 – 6.27

amount of overheads allocated to a leased asset (where the capital charge is included in the operating lease included in previously attributed costs base) would be higher than the same asset purchased outright (where the capital cost, in the form of ROCE, would not be included in the previously attributed costs base)."

- "Excluding capital costs would lead to allocatively inefficient prices. From a theoretical perspective, a Ramsey pricing based approach to cost recovery – which allocates common costs in proportion to the inverse elasticity of demand for different services, provides the most efficient pattern of cost recovery".

4.95 A LRIC+EPMU approach apportions common costs across services for which a long run incremental cost has been identified. BT's Regulatory Financial Statements report CCA FAC costs and these are not based on a LRIC+EPMU approach to costing. Rather, some costs in the Regulatory Financial Statements are directly attributed and other costs are attributed in accordance with the Regulatory Accounting Principles, including an assessment of the activities that caused those costs to be incurred.[102] This review is concerned with the methodologies BT uses to attribute costs in its Regulatory Financial Statements and whether those methodologies comply with the Regulatory Accounting Principles. We have explained in this section why i) we consider that costs with no causality should be attributed in accordance with all the activities undertaken by BT, ii) we consider that this should be represented by what BT has spent its money on during the year and iii) this is reflected in our PAC proposal.

4.96 In response to FTI's second point, this review is concerned with BT's cost attributions against the Regulatory Accounting Principles rather than cost recovery and setting prices. However, while we agree that excluding the cost of finance from an attribution rule would lead to different prices compared to an attribution rule that included the cost of finance, it is not obvious that those prices would be distorted. Distortion implies that the prices set would be different from an economically optimal set of charges. However, we do not know what attribution of costs would be consistent with such a set of optimal charges (for example, those implied by following Ramsey pricing principles in FTI's third point). We therefore disagree that prices would necessarily be distorted if they were set using costs that had been attributed using a PAC attribution rule that excluded the cost of capital.

Line of business

4.97 In June, our PAC attribution rule attributed overhead costs from AG112 and AG103 across all of BT. BT, TalkTalk and Vodafone said that TSO support costs should be allocated based on previously attributed TSO costs rather than previously attributed total costs.[103]

4.98 Where overheads have been recorded against a particular line of business (e.g. TSO in the case of AG103 and Openreach in the case of COMCOS) we agree that they should be attributed by reference to previously allocated costs associated with that line of business. For example, TSO support function costs in AG103 support the activities of TSO rather than the activities of BT overall.

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[102] This difference was also recognised in paragraph 4.101 of the LLCC Consultation.
[103] TalkTalk, June Consultation response, page 4, paragraph 1.8. BT, June Consultation response, page 22, paragraph 69. Vodafone June Consultation response, page 9, paragraph 3.6

4.99 We therefore propose that our PAC attribution should take account of the line of business to which the overhead costs relate.

Transfer charges

4.100 Transfer charges are internal trades between BT divisions. The accounting for transfer charges has two sides: a ‘transfer out’ from one part of BT and a corresponding “transfer in” in another part of BT.

4.101 In June, our PAC attribution rule included transfer charges such that an overhead cost would be attributed to a subsequent cost category if that cost category included a transfer charge. However, we now propose to exclude transfer charges from PAC for the reasons given below.

4.102 We explain in Section 10 of this consultation, there are two types of transfer charges included in BT’s cost attribution system: balanced and unbalanced transfer charges.

4.103 Balanced transfers net out at each level of BT’s cost attribution system. For AG112, which attributes costs across all of BT, including or excluding transfer charges makes no difference because the transfer charges net off to zero in each cost category receiving an attribution of costs. However, the other four cost categories are specific to particular lines of business. Here, we propose to attribute costs from, say, COMCOS to cost categories that already include Openreach costs. Including balanced transfer charges in PAC would not be appropriate because only one side of the balanced transfer is visible; the part of the transfer that relates to Openreach. We therefore propose to exclude balanced transfers from our definition of PAC.

4.104 Unbalanced transfers do not net off within BT’s cost attribution system. These transfers are usually associated with BT’s ‘non-core’ (usually overseas) subsidiaries. Where a non-core subsidiary (such as some parts of Global Services) does work for a core division such as Openreach this will be recorded as a transfer in (debit) in Openreach and a transfer out (credit) in the non-core subsidiary. BT’s cost attribution system however will only show the transfer into Openreach, so it will be ‘unbalanced’.

4.105 Excluding unbalanced transfer charges from PAC means that the costs being transferred remain in the division that incurred them. Under the previous ‘line of business’ sub-heading we said that the PAC attribution should take account of the line of business to which the costs in these five categories relate. In doing so it may be appropriate to exclude unbalanced transfer charges since they were not originally incurred by the line of business that these overhead costs were supporting. In addition, as discussed in Section 10, some unbalanced transfer charges into core units reflect the external price charged by other parts of BT, and may therefore include a mark-up on costs. Including such transfer charges may have the effect of attributing overheads to cost categories twice (once in the transfer charge and again via the attribution of, say, AG112). We therefore propose to exclude unbalanced transfer charges from PAC.

Overseas operations

4.106 In June, our PAC attribution rule attributed overhead costs from AG112 across all of BT, including overseas operations.[104]

4.107 BT agreed[105] with its consultant's (FTI) comments in relation to attributing costs to overseas subsidiaries. FTI said

> "…many of the group support functions provided by BT such as elements of the finance, legal and HR teams are not relevant to overseas businesses which carry out at least some of these functions locally.
>
> To the extent therefore that some Group functions are not relevant to overseas businesses, the cost causality argument would require that a relevant proportion of these group functions are not allocated to the overseas businesses.
>
> If Ofcom's proposed base is to be applied in the RFS, we recommend that BT identify those activities of group overhead functions which are undertaken directly by the overseas businesses. The previously allocated cost base should then be adjusted to ensure these group overhead cost categories are not allocated to overseas business units."

4.108 In principle we agree that where BT can demonstrate that costs from these five cost categories are only incurred to support UK activities and not overseas activities, then the attribution rule should reflect this. However, the information we have received from BT so far indicates that almost all Group functions included in AG112 support both UK and overseas operations, although the amount of work related to overseas operations may fluctuate year to year and some specific sub-teams may focus exclusively on UK operations.[106] Given this, we consider it is appropriate to include the cost of overseas operations in the PAC attribution rule.[107]

Proposed PAC attribution rule

4.109 Table 4.7 summarises the costs included in our proposed PAC attribution rule and how this differs from our June PAC proposal.

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[104] In June we also attributed AG103 across all of BT, but this is no longer the case because we propose to only attribute AG103 to previously attributed TSO costs, as explained under the 'line of business' sub-heading.
[105] BT June Consultation response, page 22, paragraph 65
[106] BT response dated 19 October 2015 (Q20).
[107] By exception it may be appropriate to attribute some costs from AG112 to UK operations only subject to evidence being provided by BT.

Table 4.7: Costs included in PAC

Elements of PAC	Current Pay and ROA	June PAC proposal	Revised PAC proposal
Current pay	✓[1]	✓	✓
Non-pay	×	✓	✓
Capital expenditure	×	×	✓
Depreciation	×	✓	×
ROA	✓	×	×
Transfer charges	×	✓	×
Reflect relevant line of business	✓	×	✓
Attribute AG112 to overseas	×	✓	✓

Note: [1]The current Pay and ROA methodology includes capitalised pay within current pay.

4.110 In light of the above, we propose to apply the following attribution rule to any cost with no causality that is currently attributed using the Pay and ROA methodology:

> Previously allocated costs (PAC) attribution rule: Costs should be attributed pro-rata to any cost category (e.g. activity group, plant group, residual) that has previously received an allocation of one or more of the following: i) [Line of business] current pay costs, [Line of business] ii) non-pay costs (excluding POLOs, other operating income and software capitalisation credits) iii) [Line of business] capital expenditure at the relevant level and sequencing of the cost allocation system. The pro-rata attribution to each cost category should be based on the total cost in the cost category relating to i), ii) and iii) as a proportion of the total cost of i), ii) and iii) at the relevant level and sequencing of the cost allocation system. This definition of PAC excludes all transfer charges.

4.111 Where it is identified that costs from AG112 are only incurred to support UK activities, the PAC attribution rule will be amended accordingly.

4.112 For each of the five cost categories, Table 4.8 shows the proportion of cost that would be attributed to regulated markets in 2013/14 using our revised definition of PAC and also shows how this PAC attribution compares to the current Pay and ROA attribution.

Table 4.8. Proportion of costs that would be attributed to regulated markets, 2013/14

	AG112	AG103	COMCOS	AG409	AG410
Current pay	23%	21%	61%	19%	66%
Non-pay (excluding POLOs, etc)	14%	25%	36%	3%	44%
Capital expenditure	47%	43%	70%	29%	69%
PAC (weighted average of above)	24%	29%	63%	12%	64%
Existing Pay and ROA	*53%*	*39%*	*78%*	*20%*	*79%*

Source: BT modelling provided on 15 October 2015. Note: The percentages take into account the relevant lines of business (e.g. AG103 attributed to TSO PAC). All AG112 costs are attributed to overseas operations.

Review of costs attributed using the Pay and ROA methodology

4.113 In the next section we review the costs included in each of the following cost categories.

- AG112 (Corporate Costs)
- AG103 (TSO Support Functions)
- COMCOS (Openreach overheads)
- AG409 (BT Wholesale general software)
- AG410 (Openreach general software)

4.114 For AG112 and AG103 we explain what we proposed in June, respond to any stakeholder comments and propose alternative attribution rules. For COMCOS, AG409 and AG410 we describe the costs recorded against these cost categories and propose alternative attribution rules. For all categories, we propose to attribute costs with no causality using PAC, as defined above.

4.115 In reviewing these categories we have typically disaggregated the costs either by BT's OUC[108] descriptions (e.g. Group Finance, Group Legal) or by F8[109] code (e.g. 'internally developed software'). For the purposes of this review we consider that this provides a more granular view of the relevant cost categories but we recognise that it would be possible to analyse these costs in more detail; for example the "Group Finance" OUC is made up of a number of smaller finance teams. In some cases, it is possible that a more detailed assessment may lead to different proposals for cost attributions. However, there is a balance to be struck between the granularity of costs to review, the time available to conduct the review, and the likely materiality of the impact of changing the attribution rule. We consider that the level of disaggregation set out in this document is appropriate and proportionate for the purposes of this review. However, we recognise that a more or less granular review may be appropriate in other cases.

[108] Organisational Unit Code. BT's 2015 AMD says "The codes for OUCs follow a hierarchical structure, with the first level of the OUC code defining the highest level of the organisation unit and the subsequent letters of the OUC code representing the more detailed sub-divisions within the top-level organisation unit. For example, OUC code K, represents BT Wholesale, and code KB represents a subsidiary organisational unit within BT Wholesale" (page 8). We have mostly considered BT's 2-digit OUCs, which refer to the largest units sitting under each of the line of business (e.g. Openreach Finance within Openreach).

[109] BT's 2015 DAM says "general ledger codes are grouped into 'F8 codes', which represent groups of similar general ledger codes. One or many GL Codes are aggregated to an F8 code" (page 8). F8 codes usually describe the type of cost (e.g. a pay cost or non-pay cost).

AG112: Corporate costs

Introduction

4.116 BT's 2013/14 DAM says that "AG112 is an activity pool including costs in support of the Chairman's office, Group Personnel, Chief Technology Officer and Technology Director. These activities tend to be of a 'head office' nature".[110]

4.117 In our June Consultation, we provided a breakdown of the costs included in AG112 and proposed alternative attribution rules. For most costs in AG112 we disaggregated the cost by BT's OUC description (e.g. Group Finance, Group Legal). However, one of the OUCs (OUC CD 'analysis code') contained various types of costs so we identified some of the costs in this OUC separately (e.g. insurance, employee broadband).

4.118 Tables 4.9 and 4.10 summarise the breakdown of costs in AG112 in 2013/14 and shows the attribution rule that we proposed in June alongside the attribution rule that we propose in this consultation. Where the proposed attribution rule has changed this is shown in bold. Table 4.9 details the costs that we split out by OUC while Table 4.10 shows the costs included in OUC CD (analysis code).

[110] BT, Detailed Attribution Methodology 2013/14, page 34.

Table 4.9: Costs in AG112 in split by OUC and cost attribution proposals

OUC	Description	2013/14 £m	June proposal	Current proposal
TM	BT TSO CIO for Group	[✂] £50m to £100m	PAC	PAC
TU	BT TSO Research & Innovation[1]	[✂] £10m to £50m	PAC	PAC/Residual[3]
TR	BT TSO CIO for Retail	[✂] £0m to £10m	BT Retail PAC	PAC
CF	Group Finance	[✂] £50m to £100m	PAC	PAC
CR	Corporate Communications	[✂] £10m to £50m	PAC	PAC
CG	Group Legal	[✂] £10m to £50m	PAC	PAC
CFR	Financial shared service centre[5]	[✂] £10m to £50m	PAC	PAC
CP	Corporate Special Projects	[✂] £10m to £50m	PAC	PAC
TT	General group computing assets[2]	[✂] £50m to £100m	Employees	**PAC**
CH	Group Human Resources	[✂] £10m to £50m	Employees	Employees
TA	BT TSO Architecture & Global IT platforms	[✂] £50m to £100m	IT costs	**PAC**
CC	Learning Academy - HR	[✂] £10m to £50m	Pay	**Employees**
CO	Strategy, Policy and Portfolio	[✂] £10m to £50m	Relevant revenue	**Relevant revenue/PAC**[4]
CD	Analysis code (insurance, employee broadband, etc)	[✂] £50m to £100m	See Table 4.10	See Table 4.10
Other OUCs	Various	[✂] £10m to £50m	PAC	PAC
Total		[✂] £500m to £1bn		

Notes: [1] Incorrectly described as BT TSO CIO for BT Wholesale in June Consultation. [2] Incorrectly described as BT TSO Research and innovation in June consultation. [3] PAC used for modelling purposes. [4] Relevant revenue applies to Ofcom licence fee while PAC applies to other costs in this category. [5] Described as Reporting, Planning and Analysis in June.

Table 4.10: Costs in OUC CD (analysis code) included in AG112

Cost	2013/14 £m	June proposal	Current proposal
Employers Liability insurance	[✂] £10m to £50m	Employees	**Attribute to lines of business consistent with BT's internal methodology and within lines of business based on BT's proposal in Table 4.14**
Employment Practice Liability insurance	[✂] £0m to £10m	Employees	
Business Interruption insurance	[✂] £10m to £50m	Property costs	
Employee healthcare insurance	[✂] £10m to £50m	Employees	
Employee death in service benefit insurance	[✂] £0m to £10m	Pay	
Motor Insurance	[✂] £10m to £50m	Fleet costs	
General Liability insurance	[✂] £0m to £10m	PAC[1]	
Other insurance	[✂] £0m to £10m	PAC[1]	
Total insurance	**[✂] £100m to £150m**		
Employee Broadband Offer	[✂] £10m to £50m	Employees	Employees[2]
Other	[✂] £(10)m to £(50)m [3]	PAC	PAC
Total	**[✂] £50m to £100m**		

Notes: [1] These two insurance categories were not separately considered in the June Consultation and were therefore covered by the PAC rule proposed for 'other costs'. [2] May be amended to employees taking up the offer where that information exists. [3]As explained below, 'other costs' in OUC CD are negative because they include software capitalisation credits.

4.119 For each of these costs we provide a description of the cost, refer to any comments on the proposed rule from stakeholders and set out any further information obtained from BT. As set out previously, where we can associate a cost with a specific activity we propose an attribution rule consistent with that activity. Where we cannot identify a specific activity we propose to use PAC.

BT TSO CIO for Group (OUC TM) - [✂ £50m to £100m] (June proposal: PAC; current proposal: PAC)

4.120 BT describes its Chief Information Office (CIO) unit activities as "the design, build and deployment of services for the line of business customers they support and the systems, networks and processes that support these services".[111]

4.121 In its consultation response BT said that "this category represents a small proportion of the total cost of the TSO CIO for Group function. This value relates to development programmes associated with Group platforms that support central administrative functions such as finance, HR, supply chain management, facilities management and group regulatory finance".[112]

[111] BT's 2013/14 DAM, page 41
[112] BT response, paragraph 53

4.122 We understand this to mean that the costs recorded in AG112 from this OUC represent the costs of developing and supporting the software and technology used by BT Group functions (Finance, HR, etc) necessary to carry out their work.

4.123 We also understand that at least some of this cost is offset by software capitalisation credits.[113] That is, BT TSO incurs an operating cost doing work on behalf of BT Group. BT Group then capitalises this operating cost, meaning that there is an offsetting 'negative' operating cost and a corresponding addition to capital employed on the balance sheet. To the extent that the cost of OUC TM is offset by software capitalisation credits, we would expect both the operating cost and software capitalisation credit to be attributed using the same attribution rule. In this way, the TSO operating cost and the software credit would net out, leaving only the balance sheet item to attribute to subsequent cost categories. Since the balance sheet item is included within the cost base of the relevant Group OUC (e.g. Group Finance, Group HR) then it will be attributed in line with the proposed rule for that OUC.

4.124 We have not been able to associate the costs of TSO CIO for Group with specific activities so we propose to attribute these costs (and any corresponding software credits) using PAC.

BT TSO Research and Innovation (OUC TU) - [✄ £10m to £50m] (June proposal: PAC; current proposal: PAC/Residual)

4.125 In June we incorrectly described OUC TU as 'BT TSO CIO for BT Wholesale'. In fact OUC TU relates to BT TSO Research and Innovation.

4.126 The TSO Research and Innovation team "run various programmes to find new ways of using technology for BT to generate revenues or transform costs".[114] BT said that these programmes typically span a number of years and gave the following examples of programmes in progress in 2013/14 and 2014/15:

- Optical core network research. New technology to increase the capacity of core fibre infrastructure. Projects included a new technology to enable the efficient bundling of channels to achieve increased speeds.

- Access network research. Laboratory and fields trials of a new technology to deliver increased speeds over the copper access network.

- Optimising operations research. Includes the development of new tools to improve the process for allocating work to field engineers and for ensuring the optimal amount of engineers are deployed in specific areas.

- New product and service research. In this period this included research on communications transit hub interconnecting.

4.127 BT said that of the [✄ £10m to £50m] total cost in 2013/14, [✄ £0m to £10m] (15%) was specifically commissioned by a line of business (e.g. Openreach, Global

[113] BT response dated 14 August 2015 (Q42). In 2013/14 there was around [✄ £50m to £100m] of software credits recorded in against OUC C (Corporate costs) in AG112.
[114] BT response dated 4 September 2015 (Q29)

Services) while the remainder (85%) was not specifically commissioned by a line of business.[115]

4.128 Some research and innovation programmes will be directly associated with or are intended to benefit existing products, while other programmes will be concerned with researching new technologies and designing new products and solutions. In addition, some research and innovation programmes are more general in nature and not associated with particular products; for example, BT might research how it could operate more efficiently across the business. The nature and mix of the research and innovation undertaken is likely to differ year to year. For these reasons, associating all of the costs of TSO Research and Innovation with a specific activity for the purpose of cost attribution is difficult.

4.129 Where research and innovation is directly associated with or is intended to benefit existing products, then, while it is difficult to associate this cost with specific activities, we consider that the costs could reasonably be attributed across all existing products.[116] We propose to allocate such research and innovation costs using PAC.

4.130 However, where research and innovation is focused on speculative research or developing new products, solutions or technologies then we do not consider that it would be appropriate to attribute such costs to existing products. For example, of the examples of programmes provided by BT, the 'access network research' and 'new product and service research' appear to relate to possible future products. We propose that the costs of these programmes could reasonably be attributed to residual markets.[117]

4.131 At this stage we do not know whether the examples of programmes provided by BT are an exhaustive list, or what the relative costs are of these programmes. We will explore this further with BT. For the purposes of modelling the impact of our proposals, the costs of TSO Research and Innovation have been attributed using PAC.

BT TSO CIO for Retail (OUC TR) - [✂ £0m to £10m] (June proposal: BT Retail PAC; current proposal: PAC)

4.132 In our June consultation we said that the costs from the BT TSO CIO for Retail related wholly to BT Retail. We therefore proposed that these costs should be attributed first to the BT Retail line of business and then within BT Retail using PAC.[118]

4.133 While OUC TR in general relates to BT Retail, BT said that the specific cost attributed to AG112 "relates to UKBS Development,[119] which is the Group-wide

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[115] BT response dated 26 August 2015 (Q6)

[116] For example, of the examples of programmes provided by BT, the costs of core network research and the efficiencies identified under 'optimising operations research' could be associated with current activities.

[117] There might be a separate question about how these costs are recovered by BT in relevant charge controls, but this is not a question that we consider here.

[118] June Consultation. page 65, paragraph 8.95 and 8.96

[119] While BT refer to UKBH in its consultation response BT has told us that this is an error. The reference should be to UK Business Solutions (UKBS).

programme that captures the cost of TSR-related systems separation".[120] These costs therefore relate to BT's commitment to the undertakings rather than the cost of running BT Retail. FTI said that these systems separation costs "should clearly be treated as a non-attributable overhead".[121]

4.134 If these costs relate to complying with the systems separation requirements of the undertakings we agree that they do not specifically relate to BT Retail. While the projects may relate to different systems in different years we consider that in general it is difficult to associate the costs of systems separation with a specific activity for the purposes of cost attribution. We therefore propose to attribute these costs using PAC.

Group Finance (OUC CF) - [✂ £10m to £50m] (June proposal: PAC; current proposal: PAC)

4.135 In June we said that Group Finance includes the costs of Group Financial Control, Internal Audit, Tax and Treasury, Group Reporting, Group Regulatory Finance, Investor Relations and Corporate Finance.[122] We said it also includes costs of an overseas operation that provides finance support to BT divisions (although we now understand that this overseas operation is recorded in OUC CFR which we discuss in paragraph 4.156).[123]

4.136 We considered that Group Finance costs are linked to all the activities of BT Group and proposed to attribute costs using PAC.

4.137 In its response BT said that there are separate finance teams in each of its lines of business (Openreach, Global Services, etc) and that the Group Finance teams are distinguished by their Group wide responsibilities.[124] BT added that there are some functions, such as Treasury, "that are duplicated in Global Services in respect of overseas operations. For these functions, BT said it is important to avoid allocation to overseas operations".[125]

4.138 BT's 2014/15 Methodology report explains that, following the directions associated with the Fixed Access Market Review, BT attributed around 20% of the costs for Group Financial Control and Group Tax (two teams that sit in Group Finance) to overseas on the basis of headcount (i.e. these costs go straight to Residual). The remaining 80% of the costs were attributed to AG112 and attributed using the Pay and ROA methodology.[126] We estimate that Group Financial control (OUC CFH) and Group tax (OUC CFW) represent about [✂ £0m to £10m] or about 15% of total Group Finance costs. As set out earlier, in principle we agree that where BT can demonstrate that Group functions only support UK operations and not overseas operations, then the attribution rule should reflect this. BT has told us that some of

[120] BT, June Consultation response, page 25, paragraph 82
[121] BT, June Consultation response, page 25, paragraph 84
[122] We understand that these teams are UK based.
[123] June Consultation, page 62, paragraphs 8.69 to8.71
[124] BT, June Consultation, response, page 18, paragraph 44
[125] BT, June Consultation, response, page 18, paragraph 45
[126] BT, 2014/15 Methodology Report, Section 3.16

the Group Finance sub-teams support both UK and overseas operations while some only support UK operations (e.g. Group Regulatory Finance).[127]

4.139 Given the information we have obtained from BT, we do not consider that the BT Group Finance costs can be associated with specific activities for the purposes of cost attribution and we therefore propose to attribute these costs using PAC, which attributes these costs across all of BT, including overseas operations.

Corporate Communications (OUC CR) - [✂ £10m to £50m] (June proposal: PAC; current proposal: PAC)

4.140 In June we said that staff in Corporate Communications produce the internal BT newsletter, communicate with the media and also internally across BT's divisions.[128] We considered that Corporate Communications costs were linked to all the activities of BT Group and proposed to attribute costs using PAC.

4.141 In its response BT said that Corporate Communications was made up primarily of "pay costs relating to a range of internal and external communications, media relations and public affairs teams. All functions are responsible for Group-wide activities rather than [line of business]-specific communications and marketing".[129]

4.142 BT also told us that this unit does not use timesheet systems and it has not been able to identify any other internal management information that could be used to attribute these costs to specific lines of business or products.[130] On this basis, we do not consider that the Corporate Communications costs can be associated with specific activities and we therefore propose to attribute these costs using PAC.

Group Legal (OUC CG) - [✂ £10m to £50m] (June proposal: PAC; current proposal: PAC)

4.143 In June we assumed that Group Legal costs related to ensuring that the legal needs of BT Group and its corporate activities were met. We said these costs were associated with all the activities of BT and we proposed to apply a PAC attribution rule.[131]

4.144 TalkTalk considered that it should be possible to attribute "at least some central legal cost directly to specific divisions/products since much legal work is for specific procurement, contracts, tax issues, etc".[132]

4.145 BT said that this category is "made up primarily of pay costs relating to BT's Group-wide legal teams, but also includes pay elements related to the BT Board and Operating Committee, and the Corporate Governance teams".[133]

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[127] BT response dated 19 October 2015 (Q20). We note that both FTI and EY recommended that BT carry out an assessment of the degree to which its group functions support overseas activities. See page 26 of the EY report and paragraph 6.34 of the FTI report.
[128] June Consultation, page 64, paragraphs 8.79
[129] BT, June Consultation, response, page 19. paragraph 50
[130] BT response dated 28 August 2015 (Q22)
[131] June Consultation, page 64, paragraphs 8.80, 8.83 and 8.84
[132] TalkTalk, June Consultation response, page 13, paragraph 3.43
[133] BT, June Consultation response, page 19, paragraph 52

4.146 BT told us that “not all lawyers record their time on our internal system (STIMS[134]). In general, the litigation and employment lawyers record their time on STIMS; the commercial lawyers supporting customer and supplier contracts (and other lawyers) do not”.

4.147 Where information from timesheets (e.g. from BT’s STIMS system) can be used to attribute legal costs to particular lines of business or products then we consider that this information should be used to attribute costs. However, it is not clear that the timesheet information available to BT can be used to attribute legal costs to particular lines of business or products in this way (i.e. it might not record this information).

4.148 Where such information is not available, or where legal costs cannot be associated with specific activities, then we consider that it is reasonable to assume that these costs have no causality. We therefore propose that Group Legal costs should be attributed using PAC.

Financial shared service centre (OUC CFR) - [✂ £10m to £50m] (June proposal: PAC; current proposal: PAC)

4.149 In June we described this cost as relating to ‘reporting, planning and analysis’ and said that we understood that these costs related to the production of BT’s annual report and ensuring consistency across BT’s reporting divisions.[135] While BT does have a ‘reporting, planning and analysis’ team, we now understand that the associated UK staff costs are included within Group Finance (OUC CF) described above.

4.150 In its response BT said that this specific cost “represents a specific charge made by Global Services to Group relating to the costs of offshore finance shared service centres in India, Latin America and Hungary”[136] BT added that “these teams provide a range of finance support services that complement the activities of the UK-based Group Finance teams”.[137] Examples of the type of services provided by these teams are accounts payable, business expenses, fixed asset registration, cash management and scanning and invoice management.

4.151 In June we said these costs were associated with all the activities of BT and we proposed to apply a PAC attribution rule.[138] Although our understanding of the function and services provided by this unit has developed, we continue to consider that the costs cannot be associated with specific activities within BT. We therefore propose to attribute these costs using PAC.

Corporate special projects (OUC CO) - [✂ £10m to £50m] (June proposal: PAC; current proposal: PAC)

4.152 In June we said that we understood these costs related to staff working on cost transformation projects and we proposed to allocate these costs using PAC.[139]

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[134] Solicitor Time and Information Management System
[135] June Consultation, page 64, paragraph 8.81
[136] BT, June Consultation response, page 18, paragraph 46
[137] BT, June Consultation response, page 18, paragraph 47
[138] June Consultation, page 64, paragraph 8.83
[139] June Consultation, page 64, paragraph 8.85 and 8.86

4.153 TalkTalk considered that it "should be possible to directly allocate this cost to divisions since these types of projects are bounded. In particular, it is unlikely that there are transformation projects that involve both Openreach and other divisions (given that Openreach is functionally separate) so the portion of this cost that should be allocated to Openreach should be clear."[140]

4.154 BT said that "this category represents the cost of undertaking a wide range of corporate projects, the specific nature of which may vary significantly from year to year. These projects might include the transformation projects of the type outlined by Ofcom but will also include one off internal consulting projects relating to, for example, corporate sponsorship, pensions and regulation."[141]

4.155 BT told us that some of the projects that this team worked on in 2013/14 and 2014/15 included Commonwealth Games sponsorship, trialling its flexible resource unit, organisational health projects and legal entity consolidation.[142] BT told us that all of the projects are corporate in nature.

4.156 This team works on a number of different internal consultancy projects, the nature of which can change from year to year. We agree with TalkTalk that if these projects could be associated with particular lines of business then it would be reasonable to first attribute the costs to those lines of business (and then follow a rule such as PAC within that line of business). However, BT has told us that the costs currently recorded against Corporate Special Projects relate to corporate activities within BT Group rather than specific lines of business such as Openreach or Global Services.

4.157 On this basis, we do not consider that the costs currently recorded against Corporate Special Projects can be linked to specific activities for the purposes of cost attribution. We therefore propose that these costs are attributed using PAC.

4.158 However, where BT can map these projects to specific lines of business in future we would expect it to do so. The costs incurred by Corporate Special Projects may therefore be an area we review in future charge controls.

General group computing assets (OUC TT) - [✂ £50m to £100m] (June proposal: Employees; current proposal: PAC)

4.159 In June we incorrectly described this OUC as 'BT TSO Research & Innovation' when a better description of the costs from this OUC included in AG112 would be 'general group computing assets'.

4.160 In June we said that the costs of this OUC recorded in AG112 include costs relating to employee computing equipment and services. We said this includes the depreciation costs of desktop and laptop computers, printing devices, network storage services and other IT equipment used to support BT's employees.[143]

4.161 We said that that we would expect the level of these costs to be linked to the number of employees within a division, and divisions with a higher number of employees

[140] TalkTalk, June Consultation response, page 13, paragraph 3.45
[141] BT, June Consultation response, page 18, paragraph 48
[142] BT, response dated 26 August 2015 (Q34)
[143] June Consultation, page 61, paragraph 8.62

would use more computing assets. We proposed to attribute the costs using the number of employees.[144]

4.162 TalkTalk said that if this cost relates to employee computing equipment and services then it considered a better attribution rule would be office-based employees that use computers.[145]

4.163 BT said that "this category represents depreciation charges relating to computing asset categories including Own Use Mainframes and Peripherals, Data Communications Equipment and Personal Computers. It also includes depreciation relating to accommodation plant used in support of data centres."[146] BT said it agreed with FTI who said that it did not consider that an attribution rule based on employees would provide a more cost causal approach.

4.164 Table 4.11 provides a breakdown of the depreciation charges recorded in this OUC that are allocated to AG112. More than half of the cost relates to depreciation on computer mainframes and computer centres.

4.165 BT said that all of these assets are UK based but that the data services can host applications used overseas. This is indicated in the final column of Table 4.11.

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[144] June Consultation, page 61 and 62, paragraphs 8.62, 8.64 and 8.65
[145] TalkTalk, June Consultation response, page11, paragraph 3.28
[146] BT, June Consultation response, page 24, paragraph 81

Table 4.11: Breakdown of depreciation costs in OUC TT in AG112

Class of work	Description	2013/14 £m	% of total	UK/ overseas
COMPA	Computer mainframes and peripherals	[✂] £10m to £50m	35%	Both
ACPC	Accommodation plant – computer centres	[✂] £10m to £50m	20%	Both
COMPE	Personal computers	[✂] £10m to £50m	14%	UK
COMPF	Computer data comms equipment	[✂] £10m to £50m	13%	UK
ACPS	Accommodation plant – security	[✂] £0m to £10m	10%	Both
LIC	Licences for intangible assets (e.g. software)	[✂] £0m to £10m	6%	UK
Other		[✂] £0m to £10m	2%	
Total		[✂] £50m to £100m	100%	

Source: BT responses dated 5 August 2015 (Q25) and 21 August 2015 (Q24).

4.166 BT's DAM says that the COMPA, COMPE and COMPF classes of work relate to BT's own use general computers cost[147] while ACPC and ACPS are associated with network accommodation plant "necessary for the operation of network equipment, e.g. ventilation and cooling plant".[148]

4.167 For most of these computing costs we consider that it is difficult to associate the cost with specific activities, and that the costs of mainframes and datacentres are associated with the general activities of operating the business. We therefore propose to apply our PAC methodology to these costs.

4.168 For the category of personal computers (COMPE) we consider that there is an argument that the cost of personal computers is a function of the number of personal computers in use which in turn is linked to the number of employees using them. We understand that these personal computers are those used by office-based workers and not the equipment used by BT's field engineers.[149] A possible attribution rule would therefore be to attribute these costs on the basis of office-based employees (i.e. the employees actually using these personal computers).

4.169 We will explore with BT the possibility of attributing the cost of personal computers in way that takes into account office-based employees. However, given that personal computing costs represent about 15% of the total computing depreciation costs included in AG112 we do not consider that this would have a significant impact on the attribution of the general group computing asset costs currently included in AG112. At this stage we therefore propose to attribute all general group computing asset costs on the basis of PAC. Where the costs are incurred to support UK

[147] BT, Detailed Attribution Methodology 2013/14, page 28
[148] BT, Detailed Attribution Methodology 2013/14, page 22
[149] For example, the 2013/14 DAM describes the computers in class of work COMPE as being "office computers".

activities only (around 33% of the total according to Table 4.11) we would expect a UK PAC to be used rather than a group-wide PAC. However, we note that this stage that BT has estimated the impact of our proposal assuming that all these costs are attributed using a group-wide PAC.

Group HR (OUC CH) - [✂ £10m to £50m] (June proposal: Employees; current proposal: Employees)

4.170 In June we said that Group HR costs are predominantly pay costs for staff involved in setting and maintaining BT Group's HR policies and processes and the management of BT's divisional HR staff and activities. We proposed that these costs should be attributed based on the number of employees.[150]

4.171 TalkTalk agreed with this proposal.[151] Virgin also said that "the allocation basis of number of employees appears to improve objectivity and causality compared to the pre-existing allocation".[152]

4.172 BT said that this category largely represents the pay costs associated with teams that manage Group HR policy. BT said that while each line of business (Openreach, Global Services, etc) has its own HR function, "Group HR is responsible for central policy, including the reward team, workforce management, employee relations and union negotiations around policy and pay".[153] BT said that line of business HR teams retain responsibility for career development and recruitment, although there had been a degree of centralisation in recent years.[154]

4.173 BT agreed with FTI's comment that employees were not a good attribution rule for Group HR because "in the event that a given [line of business] materially increases its number of employees, this may have an impact on the level of cost incurred by that [line of business'] HR function, but it is far from clear there would be any effect on the costs incurred by the Group HR function".[155]

4.174 BT told us that in 2013/14 there were [✂] employees within Group HR.[156] Most of these people work in teams that provide HR services to central functions; support HR functions in other lines of business; develop leadership programmes and manage the pay, pension and well-being of employees.

4.175 We consider that Group HR costs are incurred as a result of employing people across BT and the attribution rule should reflect the divisions in which people work. We therefore propose to attribute these costs using employees, represented by BT's factorised pay methodology. As explained previously, BT's factorised pay methodology attributes costs to lines of business based on the number of employees and within lines of business costs are attributed using pay costs. We note that this

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[150] June Consultation, page 63, paragraphs 8.76 and 8.77
[151] TalkTalk, June Consultation response, page 12, paragraph 3.38
[152] Virgin Media, June Consultation response, page 8
[153] BT, June Consultation response, page 24, paragraph 78
[154] BT, June Consultation response, page 24, paragraph 79
[155] BT, June Consultation response, page 25, paragraph 84
[156] BT response dated 15 September 2015 (Q23)

would be consistent with the way BT attributes other HR functions such as Openreach HR, which is attributed on the basis of Openreach pay.[157]

4.176 The Group HR function also includes [✄] employees[158] (20% of the total) who are associated with BT's Flexible Resource Unit (FRU). The FRU is used to manage variability in resource demands within BT. Where BT's management information reveals the lines of business to which these employees were assigned then we consider that the cost of these employees should be attributed to lines of business consistent with that information (and then within lines of business on the basis of pay if no further information is available). We will explore with BT whether information exists that could help attribute the costs of employees in the FRU. However, at this stage we propose that all Group HR costs should be attributed using employees (factorised pay).

BT TSO Architecture & Global IT platforms (OUC TA) - [✄ £50m to £100m] (June proposal: IT costs; current proposal: PAC)

4.177 In June we said that the costs from this OUC recorded in AG112 related to a range of software and software development costs. We said that at least 50% of these costs relate to licences for IT equipment and systems used internally by BT. We said that other costs related to internal software development, including some 'blue sky development'.[159]

4.178 We said it was difficult to associate these costs to a specific activity driver. We considered that software licence costs could relate to the number of employees but it was not clear that this was the case. We proposed to attribute these costs in line with previously attributed IT costs.[160]

4.179 TalkTalk said the category appears to include a number of different types of costs that were poorly explained.[161] TalkTalk questioned which internal systems were being referred to; what types of software has been developed and what does blue sky development relate to.[162]

4.180 TalkTalk also said it was unclear how the 'IT cost' attribution rule should be implemented. If these costs supported other TSO activities, TalkTalk suggested attributing these costs on the basis of previously attributed TSO costs.[163]

4.181 BT said that the costs in this OUC included in AG112 were made up of the following:

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[157] BT, Accounting Methodology Documents 2014/15, page 43 says that Openreach HR costs are attributed to AG401 which is the 'Openreach pay driver' activity group.
[158] BT response dated 11 September 2015 (Q24)
[159] June Consultation, page 62, paragraph 8.66
[160] June Consultation, page 62, paragraph 8.67
[161] TalkTalk, June Consultation response, page11, paragraph 3.30
[162] TalkTalk, June Consultation response, page11, paragraph 3.30
[163] TalkTalk, June Consultation response, page11, paragraphs 3.29 and 3.31

Table 4.12: Costs included in AG112 from TSO Architecture and Global IT platforms

Cost	2013/14 £m	% of total
Development	[✂] £0m to £10m	8%
UKBS development	[✂] £10m to £50m	34%
Oracle licence	[✂] £10m to £50m	58%
Total	[✂] £50m to £100m	

Source: Paragraph 90, BT response.

4.182 BT said that the "development charge represents the costs incurred in relation to programmes undertaken for Group support functions such a revenue assurance reporting, fleet procurement and other Group areas".[164]

4.183 BT said the UKBS development charge represents the costs incurred in relation to the systems separation work required as part of the undertakings.[165]

4.184 BT said that the Oracle licence "provides BT with unlimited access to a range of Oracle applications on a non-volumetric basis, i.e. the licence costs do not vary according to the number of users, upgrades or databases".[166]

4.185 BT agreed with its consultants FTI who said: "Ofcom proposes that BT should attribute these costs based on previously allocated IT costs. In our view this is not appropriate as it implies a relationship between the costs of all other IT programmes and the costs incurred in relation to platforms and licences used by BT Group's support functions. In our view, these costs are more appropriately characterised as Group Overheads and should be attributed as such".[167]

4.186 As with OUC TM (TSO CIO for Group), the majority of these software development costs are capitalised and added to the balance sheet of the line of business to which the work relates. In this case, since the software development relates to group functions, the associated capitalisation credit and balance sheet entry will be recorded against the relevant group function (e.g. Group Finance, Group HR, etc). As with OUC TM, where the development cost recorded in OUC TA is offset by a capitalisation credit we would expect both the operating cost and capitalisation credit to be attributed in a consistent way.

4.187 Since the majority of development costs are capitalised in the group function to which they relate, the relevant attribution rule for these development costs is the one that we propose to apply to the group function that contains the balance sheet value; that is, it is the attribution of the capitalised amount that matters and not the attribution of the operating cost (since the operating cost is offset by a capitalisation credit and both the operating cost and capitalisation credit will have the same attribution rule).

4.188 For the costs of this OUC recorded in AG112, we therefore focus on the non-development costs, i.e. the Oracle licence. If the cost of this licence depended on the number of employees using it then an appropriate attribution rule might be employees. However, BT said that this licence is an enterprise wide licence that is

[164] BT, June Consultation response, page 26, paragraph 91
[165] BT, June Consultation response, page 26, paragraph 92
[166] BT, June Consultation response, page 26, paragraph 93
[167] BT, June Consultation response, page 26, paragraph 94

not dependent on the number of users. On this basis, we consider that the cost of the licence cannot be associated with a specific activity since it supports a number of systems and users across the business. We therefore propose to apply PAC.[168]

Learning Academy (OUC CC) - [✄ £10m to £50m] (June proposal: Pay; current proposal: Employees)

4.189 In June we said that BT described the Learning Academy as a "way for people to continuously develop their skills and careers and provides tools, programmes and communities to help learn, share and collaborate".[169] We said that these costs could be related to either the number of employees or the pay cost of employees. We considered that it was reasonable to assume that employees paid more would require a higher degree of training investment and so we proposed to attribute these costs based on pay costs.[170]

4.190 TalkTalk agreed with this proposal.[171]

4.191 Virgin said that attributing these costs using pay appeared to improve objectivity and causality, however, it considered this could be further improved if the training spend per OUC was used a basis.[172]

4.192 BT said that [✄ £10m to £50m] (43% of the total) of this OUC cost related to an HR outsourcing contract and the remainder related to the operational costs associated with the management training function that BT describes as the Learning Academy.[173]

4.193 BT agreed with FTI's comment that attributing these costs using pay costs (on the basis that higher paid employees would require a high degree of training investment) is a "subjective and unsubstantiated assumption upon which it would be inappropriate to base cost attribution. The outsourcing contract should be attributed as an unattributable corporate overhead in the same manner as the rest of Group HR".[174]

4.194 BT told us that all BT staff can take advantage of the Learning Academy and that there were no restrictions based on type of staff, geography or division. In addition,

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[168] In relation to our proposal in June, we recognise that 'previously attributed IT costs' was not clearly defined. During discussions with BT concerning how it would model such a rule, BT proposed to use the costs incurred in the following TSO OUCs since they are the teams where IT costs are largely recorded: TM (BT CIO for Group),TP (TSO CIO for Openreach),TR (TSO CIO for Retail),TW (TSO CIO for Wholesale),TA (TSO Architecture and Global Platforms),TC (TSO Group Customer experience),TG (TSO CIO for Global Service),TK (TSO CIO for Consumer). This implementation is similar to the proposal made by TalkTalk. We no longer propose to use an attribution rule based on previously attributed IT costs for any of BT's overheads, but if we were to do so in future, we consider that this implementation would be a starting point for any discussions.

[169] June Consultation, page 64, paragraph 8.87. Quote comes from BT's website. http://www.btplc.com/Betterfuture/OurPeople/Traininganddevelopment/Personaldevelopment.htm

[170] June Consultation, page 65, paragraphs 8.88 to 8.90

[171] TalkTalk, June Consultation response, page 12, paragraph 3.37

[172] Virgin Media, June Consultation response, page 9

[173] BT, June Consultation response, page 26, paragraph 86

[174] BT, June Consultation response, page 26, paragraphs 87-89

the same courses are available to all staff, subject to funding from the relevant budget.[175]

4.195 We consider that there is a relationship between employing staff and incurring training costs for those staff. Whether the training cost is associated more with the numbers of staff or the pay of staff will depend on the nature of the training being offered. On the basis that the same training courses are available to all staff, we consider that in this case the cost of the Learning Academy is more associated with the number of employees rather than the pay of those employees.

4.196 We agree with Virgin that where BT has information on the amount of training provided to lines of business or OUCs then this information should be used in the attribution rule. However, BT told us that that it was unable to identify any management information that could be used to attribute Learning Academy costs to lines of business,[176] although it was able to provide the number of visits to the Learning Academy website by line of business.[177]

4.197 On this basis, we therefore propose to attribute Learning Academy costs using employees.

Strategy, Policy and Portfolio (OUC CO) - [✄ £10m to £50m] (June proposal: Relevant revenue; current proposal: Relevant revenue/PAC)

4.198 In June we said that this OUC included the cost of the Ofcom licence fee. Since the Ofcom licence fee is determined based on BT's 'relevant revenue' we proposed to attribute costs from this OUC on the basis of relevant revenue.[178]

4.199 TalkTalk agreed that costs of the Ofcom licence fee should be attributed based on relevant revenue. However, TalkTalk did not consider that relevant revenue should be used to attribute other costs from this OUC.[179] TalkTalk said that other costs related mostly to unregulated activities such as NGA, FTTC and G.fast; retail developments such as BT sport and mobile and government policy issues.[180] TalkTalk considered that the activities of this unit were unlikely to relate to regulated products like MPF and EAD.[181]

4.200 BT said it agreed that the Ofcom licence fee should be attributed using relevant revenue. However, it considered that the remaining costs in this OUC related to all BT Group's activities.[182]

4.201 There was general agreement that the Ofcom licence fee should be attributed using relevant revenue. We therefore maintain our proposal that the Ofcom licence fee

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175 BT response dated 7 October 2015 (Q38)
176 BT response dated 28 August 2015 (Q22)
177 BT response dated 7 October 2015 (Q38)
178 Ofcom's tariff tables are available here: http://www.ofcom.org.uk/about/annual-reports-and-plans/tariff-tables/. In 2013/14, the fee payable for networks and services was 0.0833% of all relevant revenue above £1bn.
179 TalkTalk, June Consultation response, page 14, response paragraph 3.48
180 TalkTalk, June Consultation response, page 14, paragraph 3.49
181 TalkTalk, June Consultation response, page 14, paragraph 3.50
182 BT, June Consultation response, page 31, paragraph 116

should be attributed using relevant revenue. The Ofcom licence fee represents around half of the costs of the Strategy, Policy and Portfolio team.

4.202 We recognise however that it may not be appropriate for the remaining costs in the Strategy, Policy and Portfolio team to be attributed using relevant revenue.

4.203 BT told us that the activities undertaken in the strategy, policy and portfolio team include:[183]

- Strategy: The Group strategy team drives strategic decision making on issues which are important to BT and sets the Group's strategy which defines their purpose, goals and culture.

- Policy: The Policy team ensures that BT's positioning and advocacy on communications industry policy is aligned with the corporate strategy and takes account of regulatory, political and market developments. The team advocate positions on all issues that have an impact on the company's business activities such as NGA broadband across networks, content, and Internet and media policy.

- Portfolio: This team works with the market-facing units (MFUs) to set pan-BT portfolio strategies describing what BT sells, and how the MFUs' portfolios fit together.

- Group Regulatory Affairs: This team leads on pan-BT regulatory issues and those that have a Group impact. The team provides practical advice and enables the business to achieve its goals within the regulatory regime.

- Mobility: This team is involved in delivering a commercially successful group-wide mobility programme, such as by developing key partnerships in support of BT's business development (e.g. developing the mobile communities).

4.204 Where costs from this unit can be associated with specific lines of business or products then we agree with TalkTalk that the attribution rule should reflect this. However, BT told us that "this unit does not use timesheet systems and we have not been able to identify any other internal management information to attribute costs to [lines of business] or products".[184]

4.205 On this basis, we do not consider that the non-Ofcom licence fee costs of the Strategy, Policy and Portfolio OUC can be associated with specific activities and we therefore propose to attribute these costs using PAC.

4.206 However, we note that the amount of cost included in this OUC increased by 70% from [✂ £10m to £50m] in 2013/14 to [✂ £10m to £50m] in 2014/15. We will explore with BT the reasons for this increase and whether any information exists that can associate these additional costs with specific lines of business or products.

[183] BT response dated 28 August 2015 (Q35)
[184] BT response dated 28 August 2015 (Q22)

Insurance (included in OUC CD) - [✄ £100m to £150m]

4.207 In June we identified a number of insurance costs that were attributed from AG112 and proposed a number of attribution rules. These are summarised in Table 4.13. Note that we did not separately identify general liability or 'other' insurance in June and so these were included within other costs and were captured by our proposal to attribute other costs using PAC.

Table 4.13: Insurance costs in 2013/14 included in AG112 and June proposal

Insurance type	2013/14 £m	Attribution rule proposed in June
Employers Liability	[✄] £10m to £50m	Employees
Employment Practice Liability	[✄] £0m to £10m	Employees
Property damage & business interruption[185]	[✄] £10m to £50m	Property costs
Healthcare	[✄] £10m to £50m	Employees
Death in Service	[✄] £0m to £10m	Pay
Motor Insurance	[✄] £10m to £50m	Fleet costs
General Liability insurance	[✄] £0m to £10m	PAC
Other insurance	[✄] £0m to £10m	PAC
Total	**[✄] £100m to £150m**	

4.208 TalkTalk generally agreed with our proposals.[186] In relation to Property and Business Interruption insurance it considered that property costs or floor area could be a reasonable attribution rule for property insurance. For business interruption insurance it considered property costs was a reasonable attribution rule but did not consider that return on assets would be a good attribution rule.[187]

4.209 Virgin also generally agreed with the proposals regarding insurance, although it considered that the proposals for employer's liability, employee healthcare and property damage and business interruption insurance may not reflect the underlying risks considered by insurers when setting the premiums.[188]

4.210 BT said it agreed with Ofcom that insurance costs could be causally attributed, though it disagreed with the attribution rules we proposed. BT's consultants FTI said that:

> "Our analysis has identified the strong potential for data held by BT Group's Insurance and Risk Financing team to be used to inform the attribution of these categories. This team is responsible for gathering the information required by underwriters to assess the level of BT's

[185] In June we referred to this simply as business interruption insurance but this category does relate to both property damage and business interruption.
[186] TalkTalk, June Consultation response, page 10 -11, paragraphs 3.18, 3.21 and 3.26
[187] TalkTalk, June Consultation response, page10, paragraphs 3.22-3.25
[188] Virgin Media, June Consultation response, page 7

risks in respect to the various categories of insurance, and for negotiating these costs with external providers. The team is also responsible for determining the allocation of these premia to each LoB for management accounting purposes. In determining the allocation of premia to the LoBs, where possible the team seeks to simulate the costs that would be incurred by the LoBs if they were to undertake their own insurance and risk financing activities.

We recommend that BT investigate the use of the data maintained by the Insurance and Risk Financing team as the basis for determining the cost attributions".[189]

4.211 We met with BT to discuss its insurance costs and the way it internally attributes the cost of insurance premiums to different lines of business.[190]

4.212 BT insures itself through a mixture of self-insurance, its own captive insurance company and external purchases.

4.213 In the Regulatory Financial Statements, BT attributes the cost associated with the premiums to AG112 while any underlying surplus or deficit associated with providing self-insurance or captive insurance is attributed to residual.[191] Annual variances arise due to claims being higher or lower than expected.[192]

4.214 Following discussions with BT, we understand that the methodology used internally by BT to attribute insurance premiums to lines of business takes into account the risk factors affecting the premium, as we explain further below. This information was not available to us in June. However, we consider that the attribution rule for insurance premiums should take into account the factors affecting the size of the premiums because this would be consistent with the causality principle. We have therefore amended our June proposals so that the attribution of insurance costs in the RFS will reflect BT's internal attribution of insurance to lines of business, as set out below. Table 4.14 shows the amount of insurance that BT attributes internally to each line of business based on the risk factors affecting different insurance types.

4.215 Internally, BT only attributes insurance costs to lines of business. For cost attribution purposes we also need to consider how to attribute insurance costs within lines of business. Following discussions, BT suggested that insurance costs could be attributed within lines of business using a base which reflects some of the main risk factors affecting insurance. BT's suggestion for how insurance costs could be attributed within lines of business is shown in the final column of Table 4.14.

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[189] FTI, Report for BT on Ofcom's June Consultation, page 51, paragraphs 5.40 and 5.41
[190] For both management and statutory reporting purposes.
[191] BT response dated 4 September 2015 (Q20)
[192] We consider that BT's approach of attributing the insurance premiums to lines of business rather than the underlying costs (for self and captive insurance) is reasonable. The alternative would be to attribute the underlying costs of self and captive insurance to lines of business rather than the premiums. In the long run the underlying costs and the cost of the premiums should be similar, but there will be a difference in any one year due to the nature of insurance claims.

Table 4.14: Insurance costs by line of business and BT's proposal for attribution within lines of business

Line of business	2013/14 £m	2013/14 %	Proposed attribution within line of business
Openreach	[✂] £50m to £100m	56%	Pay[1]
TSO	[✂] £10m to £50m	15%	Pay[1]
Group Property	[✂] £0m to £10m	3%	Via AG106[2]
Group	[✂] £0m to £10m	3%	PAC
BT Wholesale	[✂] £0m to £10m	3%	Pay
Global Services and BT Retail	[✂] £10m to £50m	20%	Pay
Total	**[✂] £100m to £150m**	100%	

Notes: [1]except property damage, business interruption and terrorism insurance for which BT proposes to use fixed assets. [2]This would be subject to the changes we propose in section 5 affecting AG106.

4.216 BT suggested using pay to attribute insurance costs within lines of business for most categories of insurance. However it suggested attributing insurance costs using fixed assets for property, business interruption and terrorism insurance; AG106 (the Group property activity group) for Group property and PAC for BT Group. We consider that BT's suggestions are appropriate since they reflect the risk factors affecting the premiums for many of these insurance types, in particular the larger categories of insurance (i.e. those not included within 'other insurance' below). We have therefore amended our proposals from June and make new proposals for each category of insurance, as set out below. Our proposals are consistent with the way BT internally attributes insurances costs to lines of business, and within lines of business our proposals are consistent with BT's suggestions as set out in Table 4.14.

Employers' liability insurance ([✂ £10m to £50m])

4.217 This insurance protects BT from claims brought from UK-based employees for death, injury, illness or disease. This category of insurance is compulsory in the UK. In June we proposed that these costs should be attributed based on the number of employees.

4.218 BT told us that the main factors affecting the premium for employers' liability insurance were:

- Pay costs. Damages are likely to be greater for those on higher salaries.
- Type of employee. Manual staff are exposed to more risk of accidents and disease than clerical staff.
- Number of claims incurred in past.

4.219 BT said that when attributing the cost of this insurance to lines of business it takes into account both the value of claims from that line of business over the previous five years and adjusts this against the pay costs between lines of business.[193] In this way, BT takes account of the main risk factors associated with this insurance. We consider that this approach better reflects the relevant risk factors of employer's liability insurance and so we have amended our June proposal so that these costs are attributed to lines of business consistent with BT's internal methodology.

4.220 Within lines of business, we propose to attribute employers' liability insurance on the basis set out in Table 4.14.

Employment practice liability ([✂ £0m to £10m])

4.221 This protects BT from claims brought from employees for wrongful employment acts such as unfair dismal or discrimination. In June we proposed that these costs should be attributed based on the number of employees.

4.222 BT told us that the main factors affecting the premium for employers' liability insurance were:

- Pay costs: awards are greater for those on higher salaries.
- Number of claims.

4.223 BT said that internally it attributes this insurance cost to lines of business based on pay costs as this is one of the main risk factors associated with this insurance.[194] We consider that this approach better reflects the relevant risk factors of employment practice liability insurance and so we have amended our June proposal so that these costs are attributed to lines of business consistent with BT's internal methodology.

4.224 Within lines of business, we propose to attribute employment practice liability insurance on the basis set out in Table 4.14.

Property damage and business interruption insurance ([✂ £10m to £50m])

4.225 This insurance protects BT from i) loss or damage to assets (not only 'property' in the sense of a building), such as that arising from flood or fire and ii) the consequential losses in terms of lost revenue or increased costs resulting from that damage. BT said that approximately two-thirds of this insurance cost relates to property damage and one-third to business interruption. In June we proposed that these costs should be attributed based on previously attributed property costs.

4.226 For property damage BT told us that the main factor affecting the premium was the value of the assets in each line of business.[195] Internally, BT therefore attributes the cost of property damage insurance to lines of business based on fixed asset values. We consider that this approach better reflects the relevant risk factors of property damage insurance and so we have amended our June proposal so that these costs are attributed to lines of business consistent with BT's internal methodology.

4.227 For business interruption insurance BT told us that the main factor affecting the premium is the maximum loss that would be associated with a certain type of building

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[193] Presentation to Ofcom, 20 August 2015, slides 4 and 5
[194] Presentation to Ofcom, 20 August 2015, slide 6
[195] Presentation to Ofcom, 20 August 2015, slide 9

affected by, for example, flood or fire.[196] BT told us that the maximum loss is estimated for each asset (e.g. a data centre or local exchange) by BT's insurance team with the help of external experts. These maximum loss amounts are written into the policy. Internally, BT therefore attributes the cost of business interruption insurance to lines of business based on the maximum loss values. We consider that this approach better reflects the relevant risk factors of business interruption insurance and so we have amended our June proposal so that these costs are attributed to lines of business consistent with BT's internal methodology.

4.228 Within lines of business, we propose to attribute property damage and business interruption insurance on the basis set out in Table 4.14.[197]

Healthcare insurance ([✄ £10m to £50m])

4.229 This is the cost of BT providing access to private medical care for eligible BT staff and the cost of the claims administrator. In June we proposed that these costs should be attributed based on the number of employees.

4.230 BT told us that the cost of this insurance is attributed to lines of business based on the number of members in that division, taking into account the type of member (e.g. if they have single, family or married couples insurance).[198] We consider that this approach better reflects the relevant risk factors of healthcare insurance (the number of members) and so we have amended our June proposal so that these costs are attributed to lines of business consistent with BT's internal methodology.

4.231 Within lines of business, we propose to attribute healthcare insurance costs on the basis set out in Table 4.14.

Death in service pension ([✄ £0m to £10m])

4.232 This is the cost of providing death in service pension for eligible staff dependents. This benefit is associated with the BT Retirement Fund.[199] In June we proposed that these costs should be attributed based on pay.

4.233 BT told us that internally the cost of this insurance is attributed to lines of business based on the number of members in that line of business.[200] We consider that this approach better reflects the cost of this insurance associated with each line of business. This death in service pension relates to more recent employees while lines of business such as Openreach tend to have more long-term employees who are in a different pension scheme. Attributing these costs using our June proposal of pay would therefore not appropriately reflect the membership of this pension scheme. We

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[196] BT presentation to Ofcom dated 20 August 2015, slide 9

[197] BT suggested attributing property damage and business interruption insurance costs within each line of business on the basis of fixed assets for Openreach and TSO. While 'fixed assets' is not one of the risk factors associated with business interruption insurance (maximum loss is the main risk factor), the insurance does relate to losses associated with assets and we therefore consider that it would be appropriate to attribute business interruption insurance costs within Openreach and TSO on the basis of fixed assets.

[198] Presentation to Ofcom, 20 August 2015, slide 10

[199] Employees joining BT since 2001 will be members of this pension scheme. Longer-term employees will belong to the main BT Pension Fund.

[200] Presentation to Ofcom, 20 August 2015, slide 11

have therefore amended our June proposal so that these costs are attributed to lines of business consistent with BT's internal methodology.

4.234 Within lines of business, we propose to attribute death in service pension insurance on the basis set out in Table 4.14.

Motor insurance ([✂ £10m to £50m])

4.235 Motor insurance covers the cost of own and third party injury and damage. In June we proposed that these costs should be attributed based on previously attributed fleet costs.

4.236 BT told us that the main factors affecting the premium are the number of vehicles and the number of claims.[201] BT said that internally it attributed motor insurance to lines of business based on the number of vehicles in that line of business.[202] We consider that this approach better reflects the relevant risk factors of motor vehicle insurance and so we have amended our June proposal so that these costs are attributed to lines of business consistent with BT's internal methodology. We note that almost all motor vehicles are used by Openreach or TSO.

4.237 Within lines of business, we propose to attribute motor insurance on the basis set out in Table 4.14.

General liability insurance [✂ £0m to £10m])

4.238 General liability insurance protects BT from claims made by third parties for injury, death or damage to property. In June we did not separately identify general liability insurance costs and so these costs were included in our general proposal to use PAC for other costs.

4.239 BT told us that the main factor affecting the premium is revenue.[203] BT said that internally it attributed general liability insurance to lines of business based on the revenue of that line of business.[204, 205] We consider that this approach better reflects the relevant risk factors of general liability insurance and so we have amended our June proposal so that these costs are attributed to lines of business consistent with BT's internal methodology.

4.240 Within lines of business, we propose to attribute general liability insurance on the basis set out in Table 4.14.

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[201] Presentation to Ofcom, 20 August 2015, slide 8

[202] BT told us that while Openreach tends to have more expensive technical vehicles that spend more time on the road, the attribution rule used in the management accounts is not weighted to take this into account.

[203] Presentation to Ofcom, 20 August 2015, slide 7

[204] BT told us that it also reviews whether there is any persistent high-level claims activity from specific lines of business and if so it would load the premiums onto that line of business.

[205] BT response dated 25 August 2015 (Q19).BT told is that in attributing this insurance cost to lines of business it used total revenue adjusted for cost of sale payments between lines of business. For example, if BT Retail takes in £10m in total revenue but pays a cost of sale of £7m to Openreach, then 3m will be shown as BT Retail revenue and £7m as Openreach revenue.

Other insurance ([✂ £0m to £10m])

4.241 Table 4.15 lists the remaining types of insurance, the approximate size of the premiums in 2013/14 and the main factor affecting the premium according to BT. In June we did not separately identify any of these costs and so they were included in our general proposal to use PAC for other costs. The column heading 'main factor affecting the premium' corresponds to the methodology used internally by BT to attribute these costs to lines of business. We consider that these approaches better reflect the relevant risk factors affecting these categories of insurance and so we have amended our June proposal so that these costs are attributed to lines of business consistent with BT's internal methodology.

Table 4.15: Breakdown of other insurance categories in 2013/14

Insurance type	2013/14 £m	Main factor affecting premium
Terrorism	[✂] £0m to £10m	Assets/business interruption figures
Environmental liability	[✂] £0m to £10m	Revenue
Goods in transit marine	[✂] £0m to £10m	Sendings
Directors & Officers	[✂] £0m to £10m	Group loading/revenue
Permanent health	[✂] £0m to £10m	Members
Personal accident	[✂] £0m to £10m	Salaries
Long term income continuance	[✂] £0m to £10m	Members
Rehabilitation	[✂] £0m to £10m	Headcount
Ex-pat healthcare	[✂] £0m to £10m	Members
Travel	[✂] £0m to £10m	Usage/claims
Team costs	[✂] £0m to £10m	Revenue
Other	[✂] £0m to £10m	
Total	**[✂] £0m to £10m**	

4.242 Within lines of business, BT suggested attributing these costs in line with Table 4.14. Given that these other insurance categories are relatively small (the largest premium in 2013/14 was £1.5m) we consider that BT's suggestion, as set out in Table 4.15, is appropriate and proportionate.

Employee Broadband offer - [✂ £10m to £50m] (June proposal: Employees; current proposal: Employees)

4.243 In June we said that these costs relate to the free broadband service that BT offers to its UK-based staff. This cost represents a transfer from BT Retail to BT Group.[206] We proposed to attribute these costs on the basis of employees.[207]

[206] BT's Accounting Methodology Documents 2014/15 describe this transfer charge: "This trade is from BT Retail to BT Group at external prices for the discounted broadband lines which employees are entitled to receive". See page 271.
[207] We also said that it was not clear that it was appropriate to estimate the costs of this benefit by reference to the external price. We consider this further in the transfer charges section (in section 10) of this document.

4.244 TalkTalk agreed with using employees to attribute these costs.[208] Virgin also agreed that using employees would be objective and causal than the existing rule, however it considered this could be improved by attributing costs based on the number of employees that actually take up the offer.[209]

4.245 In its response BT confirmed that this is the cost of providing free employee broadband benefit to UK-based employees.[210] However, BT did not consider that these costs could be causally attributed.

4.246 From a causality perspective, we consider that the cost of providing free broadband to employees is associated with the number of employees who take up this offer. If no employees took up the offer then it is not clear that there would be any costs associated with it.

4.247 On this basis we agree with Virgin that, where the information is available, the attribution rule should take into account the number employees taking up the offer (for example by line of business). In the absence of this information, we consider that this cost should be attributed based on the number of UK employees, i.e. those eligible to take up the offer, using factorised pay. At this stage we therefore propose that BT should attribute these costs using employees (factorised pay) but we will explore with BT whether it has information on the number of employees taking up the broadband offer by line of business.

Other costs in AG112

4.248 The remaining costs in AG112 are made up of costs associated with a further 30-40 OUCs that have small amounts of cost associated with them in 2013/14 and remaining costs in OUC CD (analysis code). These are summarised below.

Table 4.16: Other costs in AG112, 2013/14, £m

Cost	2013/14 £m	June proposal
Other OUC costs	[✂] £0m to £10m	PAC
Other costs in OUC CD (analysis code)	[✂] £(10)m to £(50)m	PAC

Other OUC costs

4.249 Given the relatively low level of costs in each of these OUCs, we have not considered in detail whether the costs in each of them can be associated with specific activities. However, we have considered the nature of the costs in the largest remaining OUC: OUC E (corporate adjustments) which had [✂ £0m to £10m] of costs in 2013/14.[211] The amounts in OUC E typically relate to one-off costs; for example, in 2013/14 the cost largely relates to external legal costs associated with changing pension legislation.[212] Since the nature of corporate adjustments in OUC E

[208] TalkTalk, June Consultation response, page 10, Paragraph 3.20
[209] Virgin Media, June Consultation response, page 7
[210] BT, June Consultation response, page 24, paragraph 80
[211] OUC WP (a Group Property OUC) also had [✂ £(10)m to £(50)m] included in AG112. However, these costs were all transfer charges that netted off with corresponding transfers elsewhere in BT Group and so they have no impact on cost attributions.
[212] BT response dated 25 September 2015 (Q44)

can vary from year to year we consider that they cannot be associated with specific activities and we propose that they should be attributed using PAC at this stage. However, BT should review the size and nature of these corporate adjustments each year and attribute them accordingly.

Other costs in OUC CD (analysis code)

4.250 This OUC includes a variety of costs including costs associated with insurance and the employee broadband offer which we considered above.

4.251 However, there remains around [✂ £(10)m to £(50)m] of cost included in this OUC against AG112. The two largest cost items are:

- Global services internal charges: [✂ £10m to £50m].
- Software capitalisation credits: [✂ £(10)m to £(50)m].

4.252 BT told us that the Global services internal charges are made to BT Group for the use of its products[213] that BT uses to provide its own internal networks. Services delivered over its internal networks include the BT intranet, financial systems, HR systems and email.

4.253 We understand that while some services delivered over the internal networks could be associated with employees (for example the intranet and email), in general the internal network supports a number of services across BT such that the cost of providing the internal network cannot be associated with specific activities. We therefore propose to attribute this cost using PAC.

4.254 In relation to software capitalisation credits, we explained above that these credits are offset by the operating costs that are being capitalised (typically from OUCs TA and TM). We also proposed above that software capitalisation credits should be attributed on a basis consistent with the offsetting operating cost, which will mean that they have no impact on cost attributions. The amount of software cost capitalised will be attributed according to the methodology applied to the relevant OUC.[214]

Summary of proposals for AG112

4.255 Table 4.17 summarises our proposed attribution rules for the costs currently attributed from AG112 (corporate costs) and the proportion of costs that we propose to attribute using each rule. We propose four broad attribution rules compared to seven in June.

[213] In particular, SHDS Connect, IP Connect UK, Optical Connect, X25 and Interconnect Connect products.

[214] For example, if TSO develops software costing £100 for Group HR and this amount is capitalised then TSO will have an operating cost of £100 while Group HR will have an offsetting capitalisation credit of £100 and an amount of £100 on its balance sheet. The TSO operating cost and software credit offset each other and as long as they are attributed in the same way they will have no impact on costs attributions. The £100 on the Group HR balance sheet will be attributed according to the attribution rule for Group HR.

Table 4.17: Proposed rules to attribute costs from AG112

Attribution rule	June proposal £m	June proposal %	Current proposal £m	Current proposal %
PAC	[✂] £250m to £300m	44%	[✂] £400m to £450m	67%
Employees	[✂] £150m to £200m	30%	[✂] £50m to £100m	14%
Pay	[✂] £10m to £50m	6%	-	-
IT costs	[✂] £50m to £100m	12%	-	-
Relevant revenue	[✂] £10m to £50m	3%	[✂] £0m to £10m	2%
Fleet costs	[✂] £10m to £50m	3%	-	-
Property costs	[✂] £10m to £50m	2%	-	-
Insurance attribution rule	-	-	[✂] £100m to £150m	17%
Total	[✂] £500m to £1bn	100%	[✂] £500m to £1bn	100%

Definitions of AG112 attribution rules

4.256 The table below defines the attribution rules proposed for AG112. We would be interested in stakeholder comments on these definitions.

Table 4.18: Definitions of proposals for AG112

Attribution rule	Proposed definition
PAC	Costs should be attributed pro-rata to any cost category (e.g. activity group, plant group, residual) that has previously received an allocation of one or more of the following: i) [Line of business] current pay costs, ii) [Line of business] non-pay costs (excluding POLOs, other operating income and software capitalisation credits) iii) [Line of business] capital expenditure at the relevant level and sequencing of the cost allocation system. The pro-rata attribution to each cost category should be based on the total cost in the cost category relating to i), ii) and iii) as a proportion of the total cost of i), ii) and iii) at the relevant level and sequencing of the cost allocation system. This definition of PAC excludes all transfer charges.
Employees	Costs should be attributed pro-rata to any cost category (e.g. activity group, plant group, residual) that has previously received an allocation of factorised pay costs (current or capital pay associated with in-year pay costs) at the relevant level and sequencing of the cost attribution hierarchy. The pro-rata attribution to each cost category should be based on the total factorised pay in the cost category as a proportion of the total factorised pay at the relevant level and sequencing of the cost allocation system. Factorised pay means that the pay costs have been adjusted to take account of the number of employees within each BT line of business.
Pay	Costs should be attributed pro-rata to any cost category (e.g. activity group, plant group, residual) that has previously received an allocation of pay costs (current or capital pay associated with in-year pay costs) at the relevant level and sequencing of the cost attribution hierarchy. The pro-rata attribution to each cost category should be based on the total pay in the cost category as a proportion of the total pay at the relevant level and sequencing of the cost allocation system.
Relevant revenue	Costs should be attributed to services and markets based on the proportion of relevant revenue that they contributed in the prior financial year.
Insurance attribution rule	Insurance costs should be attributed to BT lines of business on a basis consistent with BT's internal methodology. Within BT's line of business insurance costs should be attributed on the following basis:

	For property damage and business interruption insurance and terrorism insurance: • Openreach fixed assets. • TSO fixed assets. • Group Property AG106. • Group PAC • BT Wholesale pay. • Global Service pay. • BT Retail pay. For all other insurance categories: • Openreach pay. • TSO pay. • Group Property AG106. • Group PAC • BT Wholesale pay. • Global Service pay. • BT Retail pay.

AG103: TSO support functions

What we said in the June consultation

4.257 TSO manages the voice, data, TV networks and IT applications which make up the core infrastructure for BT's products and services.[215] TSO is an internal service unit providing services to the customer-facing lines of business, i.e. Openreach, BT Wholesale, BT Consumer, BT Business and Global Services. It receives no revenue directly and so its costs are attributed to BT's other lines of business.

4.258 In June, we provided a breakdown of the costs included in AG103 and proposed alternative attribution rules. For most costs in AG103 we disaggregated the cost by BT's OUC description (e.g. TSO Finance). However one of the OUCs (OUC TX 'BT Centre') contained various types of costs so we identified some of the costs in this OUC separately (e.g. redundancy payments).

4.259 Table 4.19 summarises the breakdown of costs in AG103 that we published in June alongside the attribution rules we proposed in June. The table also shows our proposals in this consultation, which we explain in the following paragraphs.

[215] BT Group plc annual report 2015, page 76

Table 4.19: Costs in AG103 split by OUC and cost attribution proposals

OUC	Description	2013/14 £m	June proposal	Current proposal
TX	TSO Centre – Redundancy	[✄] £10m to £50m	Pay	TSO Pay
TX	TSO Centre – IT Services subcon offshore	[✄] £10m to £50m	IT costs	TSO PAC
TH	TSO HR & Communications	[✄] £10m to £50m	PAC	TSO Pay
TB	TSO Service, strategy & operations	[✄] £10m to £50m	PAC	TSO PAC
TF	TSO Finance	[✄] £0m to £10m	PAC	TSO PAC
TG	TSO CIO for Global Services[1]	[✄] £0m to £10m	Global Services PAC	TSO Pay
TS	TSO General Infrastructure services[1]	[✄] £0m to £10m	Pay	TSO Pay
TN	TSO Global Network Services Mgmt[1]	[✄] £0m to £10m	IT costs	TSO Pay
YL	BT Fleet	[✄] £0m to £10m	Fleet costs	TSO PAC
Other		[✄] £0m to £10m [2]	PAC	TSO PAC
Total		**[✄] £100m to £150m**		

Note: [1] As explained below the costs in these OUCs attributed to AG103 relate to Career Transition Centre costs. [2] As shown in Table 4.20 below, the total of other costs has changed, due in part to identifying CTC costs.

4.260 For each of the costs in Table 4.19 we provide a description of the cost, refer to any comments on the proposed rule from stakeholders and describe the results of any further analysis. Where we can associate a cost with a specific activity we propose an attribution rule consistent with that activity. Where we cannot identify a specific activity we propose to use PAC.

4.261 We explained earlier in this section that costs from AG103 should be attributed to cost categories containing TSO costs only because the support functions costs recorded in AG103 are incurred to support the activities of TSO. For example, where we proposed a PAC attribution in rule in June our proposal now would be TSO PAC.

BT TSO Centre - Redundancy (recorded in OUC TX) - [✄ £10m to £50m] (June proposal: Pay; current proposal: TSO Pay)

4.262 These redundancy costs relate to TSO employees that have been made redundant during the year.[216] In June we proposed to attribute these costs on the basis of pay. This was modelled by Cartesian using all (group-wide) pay costs.

4.263 TalkTalk said that if these redundancy payments relate to TSO staff then it considered the costs should be attributed based on TSO PAC or TSO Pay rather than all BT Group pay costs.[217] Virgin said that the last OUC an employee worked in

[216] BT response dated 5 August 2015 (Q49)
[217] TalkTalk, June Consultation response, page 15, paragraph 3.57

prior to being made redundant should bear the costs, but it did not consider that pay costs had a clear link to the relative costs of redundancy payments.

4.264 BT's response indicated that it agreed that Ofcom's proposed methodology of using pay was appropriate.[218]

4.265 We consider that the size of redundancy payments is associated with the pay costs of the division to which the redundancies relate. In this case the relevant division is TSO. We therefore propose that TSO redundancy costs should be attributed on the basis of TSO pay costs.

BT TSO Centre – IT services subcon offshore SGA (recorded in OUC TX) - [✂ £10m to £50m] (June proposal: IT costs; current proposal: TSO PAC via inclusion in 'other costs')

4.266 In June we said that these costs mostly related to offshore units providing software and IT system development services to BT TSO. We proposed to attribute these costs using previously attributed IT costs.[219]

4.267 TalkTalk agreed that these costs should be attributed using previously attributed IT costs. However, it was not clear how 'previously attributed IT costs' was defined.[220]

4.268 BT concurred with FTI who said "Ofcom fails to take account of the fact that this line item is an accounting (debit) adjustment raised by TSO against which there are two categories of offsetting credits. Since all of these lines items are attributed to the AG103 activity group, they net off against each other. It would be 'clearly inappropriate' to attribute this item separately to the offsetting credits".[221]

4.269 BT told us that "the specific costs against this F8 code that have been allocated to AG103 – BT TSO Support Functions are those booked by the OUC TX – BT TSO Centre. These costs mostly result from an accounting adjustment raised by BT TSO to move costs between different cost lines. There are offsetting credits in the same OUC against F8 codes 109650 General Management Pay and 200830 IT Services Sub-contractors. Since all costs in BT TSO Centre are allocated to the AG103 cost centre, then the costs net each other off".[222]

4.270 On the basis that this cost is an accounting adjustment that is netted off by a corresponding credit in OUC TX, we agree with BT that it is not necessary to identify an attribution rule specifically for this cost because both the operating cost and corresponding credit should be attributed in the same way, netting off to zero. This cost and the offsetting credit are included in OUC TX, under the subheading 'other costs in AG103' below for which we propose to attribute using TSO PAC. We therefore consider that a specific attribution rule for this cost is not required.

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[218] BT, June Consultation response, page 17, paragraph 38. Although BT's response indicates that it was going to discuss why it considered Ofcom's proposal was appropriate, it did not mention redundancy payments again in its response.
[219] June Consultation, page 69, paragraphs 8.121 – 8.123
[220] TalkTalk, June Consultation response, page 15, paragraph 3.58
[221] BT, June Consultation response, page 27, paragraph 99
[222] BT response dated 28 August 2015 (Q60)

TSO Human Resources and Communications (OUC TH) - [✂ £10m to £50m] (June proposal: PAC; current proposal: TSO Pay)

4.271 In June we proposed to attribute these TSO HR and Communications costs using PAC. [223]

4.272 TalkTalk considered that these costs should be attributed using TSO PAC.[224]

4.273 BT said that this category "represents the costs associated with the [line of business] specific HR function for TSO, which manages the day to day HR requirements for TSO (i.e. in additional to general policy elements provided by BT Group HR)."[225] BT also considered that these costs should be attributed to the TSO line of business only.[226]

4.274 Although this is a single OUC, BT told us that it estimates that around 15% of these costs relate to communications roles and 85% relate to HR roles. [227]

4.275 In light of the responses received we have reconsidered the nature of these costs and the attribution rule we proposed. As with Group HR (OUC CH described above), we consider that human resources costs are associated with the activity of employing people and the attribution rule should reflect this. We understand that it is difficult for BT to reflect employee numbers for attribution purposes at a more granular level than by line of business.[228] We therefore consider that TSO HR costs should be attributed on the basis of TSO pay costs since this will reflect the fact that TSO HR costs are incurred as a result of employing people in TSO. This approach would also be consistent with our proposal for Group HR where proposed to use factorised pay (employees) and also BT's attribution of Openreach HR costs, which are attributed using Openreach pay.

4.276 Although it is less clear what TSO Communications costs relate to, we consider that these are also likely to be incurred as a result of employing people; i.e. the costs are incurred as a result of TSO's need to communicate with its staff. We therefore consider that TSO Communications costs should also be attributed on the basis of TSO pay costs.

4.277 We therefore propose that costs associated with the TSO Human Resources and Communications function should be attributed using TSO Pay.

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[223] June Consultation, page 70, paragraphs 8.124 – 8.127
[224] TalkTalk, June Consultation response, page 15, paragraph 3.60
[225] BT, June Consultation response, page 19, paragraph 55
[226] BT, June Consultation response, page 22, paragraph 69
[227] BT response dated 5 August 2015 (Q51)
[228] 'Factorised pay' can reflect the number of employees in each line of business, but within each line of business this methodology attributes costs using pay.

TSO Service, strategy and operations (OUC TB) - [✂ £10m to £50m] (June proposal: PAC; current proposal: TSO PAC)

4.278 In June we did not provide details on the activities undertaken in this OUC which are attributed to AG103, but we considered that it provided general support to BT TSO. We proposed to attribute these costs using PAC.[229]

4.279 TalkTalk considered that these costs should be attributed using TSO PAC.[230]

4.280 BT said that the costs attributed to AG103 from the TSO Service, Strategy and Operations ("SSO") function were a small proportion ([✂ 10% to 15%] in 2013/14) of the total costs incurred by SSO. BT said that the costs in SSO included in AG103 relate to three teams:

- Strategy team: supports all of TSO, providing strategic analysis, continuous improvement and project management support.
- Business analytics team: supports all of TSO, providing business analytics reports and associated analysis.
- Production planning team: supports exchange-based engineers that make up the vast majority of SSO in relation to, for example, demand forecasting.[231]

4.281 We consider that it is difficult to associate the strategy and business analytics teams with specific activities for the purposes of cost attribution since they appear to provide services across the whole of TSO. For production planning we consider that an argument could be made that these costs are associated with the TSO engineers that they support (in which case TSO pay or TSO engineering pay may be an appropriate attribution methodology); but we consider that the production planning work could be affected by a number of activities across TSO that could impact, for example, the demand forecasting activities undertaken by this team.[232] On this basis we propose to attribute the SSO costs in AG103 using TSO PAC.

TSO Finance (OUC TF) - [✂ £0m to £10m] (June proposal: PAC; current proposal: TSO PAC)

4.282 In June we proposed to attribute TSO Finance costs using PAC.[233]

4.283 TalkTalk said that these costs should be attributed using TSO PAC.[234]

4.284 BT said that "all of the costs associated with the TSO Finance team are assigned to the AG103 TSO Support Function activity group, and are primarily pay or pay-related costs. The team provides a range of finance support services across all TSO

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[229] June Consultation, page 70, paragraph 8.127
[230] TalkTalk, June Consultation response, page 15, Paragraph 3.61
[231] BT, June Consultation response, page 20, paragraph 56
[232] FTI, report for BT on Ofcom's June Consultation, page 48, paragraph 5.36. FTI said that it also considered whether the production planning team could be separately attributed. It said that that "the low materiality of the cost of this team of 10 staff suggests that the treatment as a general overhead across all of TSO does not materially affect the distribution of total TSO costs across markets".
[233] June Consultation, page 70, paragraph 8.127
[234] TalkTalk, June Consultation response, page 15, paragraph 3.62

functions, including management reporting, business case and capital investment review, support to internal and external audit and business partnering".[235] BT also said that these costs should be attributed to TSO costs only.[236]

4.285 We consider that it is difficult to associate TSO Finance costs with specific activities since this unit provides financial support across all TSO functions. We therefore propose that these costs should be attributed using TSO PAC. This proposal is consistent with our proposal for Group Finance (OUC CF) which we earlier proposed to attribute using (group-wide) PAC.

TSO Career Transition Centre costs (various OUCs) (June proposal: n/a; current proposal: TSO Pay)

4.286 In June we made specific proposals for the following TSO functions:

- TSO CIO for Global Services (OUC TG). We said this function provides data integrity and security to BT Global Services. We proposed to attribute these costs using Global Services PAC.[237]
- TSO General Infrastructure Services (OUC TS). We said the costs from this OUC recorded in AG103 related to the Career Transition Centre (CTC). We proposed to attribute these costs using pay.[238]
- TSO Global Network Services management (TN). We said that this function supported network services globally. We proposed to attribute these costs using previously allocated IT costs.[239]

4.287 FTI found that the costs associated with these OUCs in AG103 actually related to TSO Career Transition Centre (CTC) costs.[240] TalkTalk said that Ofcom should make clear how CTC costs are attributed and review whether BT's approach is appropriate.[241]

4.288 On the basis that costs from these three OUCs included in AG103 actually relate to TSO CTC costs, we have amended our June proposal to take this into account. We have also considered the TSO CTC costs more widely, not just those that are included in these three OUCS.

4.289 BT told us that TSO CTC costs are recorded in a number of different TSO OUCs which are included in AG103.[242] In 2013/14 BT said that [✄ £10m to £50m] of costs in AG103 related to the TSO CTC, including the costs OUCs TG, TS and TN mentioned above.

4.290 The CTC costs reflect the pay and associated staff costs relating to employees whose role is no longer required (for example as a result of BT's transformation

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[235] BT, June Consultation response, page 20, paragraph 57
[236] BT, June Consultation response, page 22, paragraph 69
[237] June Consultation, page 70, paragraph 8.130
[238] June Consultation, page 71, paragraph 8.133
[239] June Consultation, page 71, paragraph 8.137
[240] FTI, Report for BT on Ofcom's June Consultation, page 46, paragraph 5.31
[241] TalkTalk, June Consultation response, page 8, paragraph 3.13, bullet 4
[242] BT response dated 15 September 2015 (Q36)

programmes or other restructuring). Employees in the CTC can be retrained and redeployed.

4.291 BT told us that for other lines of business it attributes CTC costs in proportion to the previously allocated pay in the line of business which the staff were previously employed.[243, 244] We note that BT's 2013 Reconciliation report said that BT had changed the attribution of CTC costs from attributing the CTC cost to the line of business in which the employee previously worked to attributing the CTC cost using the Pay and ROA methodology via AG112.[245] However, BT reverted to its previous attribution methodology in 2013/14.[246]

4.292 As with TSO redundancy costs discussed earlier in this section, we consider that TSO CTC costs are associated with the pay costs of TSO. We also consider that the CTC costs in AG103 should be attributed consistently with the CTC costs in other lines of business. We therefore propose that they should be attributed using TSO Pay.

Error in CTC costs attributed to AG103

4.293 During the course of investigating the costs in AG103, BT discovered an error in the amount of cost attributed to AG103 which related to the treatment of TSO CTC costs.[247] TSO CTC costs are directly allocated to AG103; however, CTC costs were incorrectly also included in the 'Except' base methodology attributing other TSO costs across a number of activity groups.[248] As a result, the amount of costs included in AG103 was too high (with costs in other costs categories being correspondingly too low). BT estimates that the impact of correcting this error in 2013/14 would be to remove around £1.5m of cost from regulated markets, with around £0.5m of this relating to business connectivity markets. BT has included the impact of correcting this error when modelling the overall impact of our proposals relating to the Pay and ROA cost categories.

BT Fleet (OUC YL) - [✂ £0m to £10m] (June proposal: Fleet costs; current proposal: TSO PAC via inclusion in 'other costs')

4.294 In June we said that it was unclear why BT Fleet costs included in AG103 would not be allocated to BT Fleet directly and attributed to products and services in line with other BT Fleet costs.[249] We proposed to attribute these costs in line with previously attributed BT Fleet costs.[250]

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[243] BT response dated 21 August 2015 (Q56)
[244] For Openreach BT said that the pay costs of staff redeployed are accounted for and attributed on the same basis as the pay costs of the Openreach OUC from which the employee was redeployed (BT response dated 17 September 2015 (Q28)
[245] BT, Reconciliation report 2013, page 29
[246] We note that PwC disagreed with the methodology change in 2012/13 in which BT included the CTC costs in AG112. In a slide presentation to Ofcom dated 14 May 2014 BT says "PwC disagreed with our method because it spreads the costs of the CTC over the business rather than linking them to the root cause of the inefficiency (i.e. the business unit which no longer requires the resource)".
[247] BT refers to this error in paragraph 73 of its response.
[248] Except bases are explained on page 42 of BT's 2014/15 AMD.
[249] June Consultation, page 71, paragraph 8.134
[250] June Consultation, page 71, paragraph 8.135

4.295 TalkTalk and Virgin agreed with our proposal.[251]

4.296 BT did not consider that there was any requirement to change its attributions in relation to BT Fleet because the particular costs identified by Ofcom in 2013/14 represented transfer charges from BT Fleet to TSO support functions.[252] These transfer charges have corresponding accounting entries in other TSO OUCs included in AG103. These are 'balanced' transfers which means that the transfers out from BT Fleet are matched by transfers into TSO[253] so that the net effect on AG103 is zero.[254]

4.297 It would not be appropriate to have different attribution rules for balanced transfers in and transfers out, so we no longer consider that a specific attribution rule is required for the small amount of BT Fleet costs included in AG103 in 2013/14.[255] To the extent that these balanced transfers need to be attributed out of AG103, we propose that this should be done using TSO PAC (though since the net transfer is zero, there will be no effect on costs attributed to subsequent cost categories).

Other AG103 costs

4.298 In June we said we had not considered in detail those OUCs included in AG103 which contained relatively small amounts of cost. We proposed to attribute these costs using PAC.

4.299 Both TalkTalk and BT considered that these costs should be attributed to TSO costs rather than group-wide BT costs.

4.300 Table 4.20 summarises the remaining costs in AG103 in 2013/14. Some of the costs included in this category in June actually relate to CTC costs so we have removed these costs from the amounts presented here since we discussed CTC costs above. As explained above, other costs also include the cost adjustment described as 'IT services subcon offshore SGA'.

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[251] TalkTalk, June Consultation response, page 16, paragraph 3.65, and Virgin Media, June Consultation response, page 11

[252] BT response dated 11 September 2015 (Q14).

[253] See section 5 for a further discussion of balanced transfers.

[254] The [✂ £0m to £10m] of cost associated with BT Fleet in AG103 is a 'transfer out' from BT Fleet (in 2013/14 the transfer out from BT Fleet happens to represent a refund and so the amount is positive) and there is a corresponding transfer into TSO OUCs of [✂ £0m to £(10)m] also included in AG103.

[255] BT has confirmed that in 2014/15 AG103 did not include any transfer charges from BT Fleet (BT response dated 5 August 2015 (Q57)).

Table 4.20: Other costs in AG103, 2013/14

OUC	Description	2013/14 £m
TX	TSO Centre – non redundancy costs	[✂] £10m to £50m
T	BT TSO	[✂] £0m to £(10)m
TZ	TSO Centre	[✂] £0m to £10m
TR	TSO CIO for Retail	[✂] £0m to £10m
TA	TSO Architecture & Global IT	[✂] £0m to £10m
TW	TSO CIO for BT Wholesale	[✂] £0m to £10m
Other		[✂] £0m to £10m
Total		**[✂] £10m to £50m**

4.301 We have not undertaken a detailed review of the other costs included in AG103 in 2013/14, but we note that most other costs included in AG103 in 2013/14 are associated with the OUCs TX (TSO Centre) and T (TSO). Around half of the remaining costs in OUC TX in 2013/14 relates to one-off fees associated with terminating third-party contracts[256] while the other half largely relates to national insurance payments on employee share options[257] (these also appear to be one-off in nature since the amount of cost included against OUC TX in 2014/15 within AG103 is much smaller). The negative value associated with OUC T includes transfer charges (including the negative transfer charge associated with Fleet discussed earlier in this section) and various accounting adjustments to move costs between TSO cost lines.[258] We would not expect these transfers or accounting adjustments to have an impact on cost attributions as long as they are attributed on a consistent basis.

4.302 We propose that other costs in AG103 should be attributed using TSO PAC.

Summary of proposed attribution rules for AG103

4.303 Table 4.21 summarises our proposed attribution rules for the costs currently attributed from AG103 (TSO support functions) and the proportion of cost that we propose to attribute using each rule. We propose two broad attribution rules compared to four in June. As set out earlier in this section, the proposed definition of PAC has changed since June, including only attributing TSO support functions costs to previously attributed TSO costs rather than group-wide costs.

[256] BT response dated 28 August 2015 (Q60)
[257] BT response dated 28 August 2015 (Q60)
[258] BT response dated 25 September 2015 (Q61)

Table 4.21: Proposed attribution rules for AG103, 2013/14

Attribution rule	June proposal £m	June proposal %	Current proposal £m	Current proposal %
PAC/TSO PAC	[✂] £50m to £100m	43%	[✂] £10m to £50m	37%
Pay/TSO Pay	[✂] £10m to £50m	39%	[✂] £50m to £100m	63%
IT costs	[✂] £10m to £50m	15%	-	-
Fleet costs	[✂] £0m to £10m	2%	-	-
Total	**[✂] £100m to £150m**	**100%**	**[✂] £100m to £150m**	**100%**

Definitions of AG103 attribution rules

4.304 The table below defines the attribution rules proposed for AG103. We would be interested in stakeholder comments on these definitions.

Table 4.22: Definitions of proposals for AG103

Attribution rule	Proposed definition
TSO PAC	Costs should be attributed pro-rata to any cost category (e.g. activity group, plant group, residual) that has previously received an allocation of one or more of the following: i) TSO current pay costs, ii) TSO non-pay costs (excluding POLOs, other operating income and software capitalisation credits) iii) TSO capital expenditure at the relevant level and sequencing of the cost allocation system. The pro-rata attribution to each cost category should be based on the total cost in the cost category relating to i), ii) and iii) as a proportion of the total cost of i), ii) and iii) at the relevant level and sequencing of the cost allocation system. This definition of PAC excludes all transfer charges.
TSO Pay	Costs should be attributed pro-rata to any cost category (e.g. activity group, plant group, residual) that has previously received an allocation of TSO pay costs (current or capital pay associated with in-year pay costs) at the relevant level and sequencing of the cost attribution hierarchy. The pro-rata attribution to each cost category should be based on the total TSO pay in the cost category as a proportion of the total TSO pay at the relevant level and sequencing of the cost allocation system.

COMCOS: Openreach overheads

Introduction

4.305 COMCOS is the name of BT's base methodology that attributes [✂ £50m to £100m] of Openreach overheads. COMCOS attributes costs using the Pay and ROA methodology, with Openreach pay and Openreach ROA[259] being used in the attribution rule.

4.306 In this section we provide a breakdown and explanation of the Openreach overheads attributed using COMCOS. As with AG112 and AG103, where it is possible to identify

[259] BT calculates an Openreach ROA by applying a cost of capital of 10.8% to Openreach fixed assets.

a causal relationship between these costs and specific activities we propose an appropriate attribution rule. For costs with no causality we propose to attribute costs using Openreach PAC.

4.307 Table 4.23 provides a breakdown of OUC costs attributed using COMCOS in 2013/14. The table also shows our cost attribution proposals in this consultation, which we explain in the following paragraphs.

Table 4.23: COMCOS costs split by OUC and cost attribution proposal, 2013/14

OUC	Description	2013/14 £m	Proposed attribution rule
BA	Openreach Learning and Development	[✂] £10m to £50m	Openreach Pay
BF	Openreach Finance	[✂] £10m to £50m	Openreach PAC
BR	Openreach Marketing and Sales	[✂] £10m to £50m	Openreach product revenues
BQ	Openreach Transformation	[✂] £10m to £50m	Openreach PAC
BJ	Openreach General Counsel	[✂] £10m to £50m	Openreach PAC
BL	Openreach Network investment	[✂] £0m to £10m	Openreach engineering team pay cost
BV	Openreach Service Delivery	[✂] £0m to £10m	
BK	Openreach Next Generation Access	-	
BI	Openreach Frames Congestion	[✂] £0m to £(10)m	
BD	Openreach Business & Ethernet	-	
Total		**[✂] £50m to £100m**	

Openreach Learning and Development (OUC BA) - [✂ £10m to £50m] (current proposal: Openreach pay)

4.308 BT told us that the Openreach Learning and Development team is part of the Openreach HR team and is responsible for designing and delivering training and development programmes for all Openreach staff.[260] The costs in this OUC largely relate to clerical and management pay costs and hospitality costs associated with training courses and meetings.[261]

4.309 BT said that this team mostly provides standalone training specifically for Openreach; for example, technical, safety, process and procedural training for the field engineering workforce in Openreach and also training for Openreach call centre staff. BT also said that job-specific leadership courses for the small number of senior managers in the group is provided by BT Group (through the Learning Academy, OUC CC), as is generic professional training for non-engineers such as project managers or finance staff.[262]

4.310 We consider that training costs are incurred as a result of employing staff. The majority of training courses offered by the Openreach Learning and Development

[260] BT response dated 5 August 2015 (Q3)
[261] BT response dated 5 August 2015 (Q4)
[262] BT response dated 17 September 2015 (Q8)

team appear to be standard courses available to engineering and office-based staff. We consider that an attribution rule based on Openreach employees could reflect the fact that the same training is available to the majority of Openreach staff, although we understand it is difficult to reflect in an attribution rule the number of employees below the level of line of business.

4.311 BT has also told us that staff delivering this training record the number of learner days provided to each Openreach OUC by programme.[263] It is possible that this information could be used to attribute Openreach Learning and Development costs to particular Openreach OUCs since it would reflect the actual training delivered, although an attribution rule would be required to attribute costs within each OUC, such as pay. At this stage we do not know whether it would be practicable to use information on recorded learner days to attribute these costs and so we propose to attribute the Openreach Learning and Development costs on the basis of Openreach Pay. We note that this proposal is consistent with the way BT currently attributes Openreach HR costs, which is also on the basis of Openreach pay.[264]

Openreach Finance (OUC BF) - [✂ £10m to £50m] (current proposal: Openreach PAC)

4.312 BT told us that the Openreach Finance team works across Openreach to provide commercial support to operational teams, produce and analyse management reports and prepare financial planning and budget documents.[265] BT also said that employees within Openreach Finance do not book their time using timesheets and only a few employees book their time to specific programmes of work.[266]

4.313 On this basis, as with Group Finance (OUC CF), we do not consider that Openreach Finance costs can be associated with specific activities since the function provides support to a range of activities across Openreach. We therefore propose to attribute Openreach Finance costs using Openreach PAC.

Openreach Marketing and Sales (OUC BR) - [✂ £10m to £50m] (current proposal: Openreach product revenues)

4.314 BT said that the Openreach Marketing and Sales team is the customer account management team that is responsible for managing the relationship with Openreach's customers.[267]

4.315 This team manages customers that buy multiple Openreach products so it is not possible to directly allocate these costs to specific Openreach products. However, we consider that the costs incurred by this team are likely to be related to the number of customers and the amount spent by those customers; for example, more costs may be associated with managing the relationship with the largest customers by spend. We therefore consider that a relationship can be established between these

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[263] BT response dated 7 October 2015 (Q26). This information indicates that almost all training was provided to the engineering teams (such as OUCs BV, BK and BL explained below), which is consistent with these teams representing the most staff in Openreach.
[264] BT, Accounting Methodology Document 2014/15, page 43
[265] BT response dated 5 August 2015 (Q3, Q5, Q10)
[266] BT response dated 5 August 2015 (Q7) and 7 October 2015 (Q26)
[267] BT response dated 21 August 2015 (Q3)

costs and Openreach product revenues. We therefore propose to attribute the Openreach Marketing and Sales costs on the basis of Openreach product revenues.

4.316 We note that this attribution rule would be similar to that applied to the Openreach Sales and Product Management team (OUC BP) in 2013/14. This team is responsible for developing specific products that are sold to customers by the Marketing and Sales team (OUC BR). In 2013/14, the costs of the Openreach Sales and Product Management team were not attributed via COMCOS but were instead largely attributed to the plant group PG502B (SG&A Openreach Sales Product Management).[268] This plant group is attributed to services using two steps:[269]

- The costs are associated with a number of product groups based on a survey of the Openreach Sales and Product management team expressed as full-time equivalents (FTEs).

- The costs of each 'product group' are attributed to services based on revenues associated with those product groups.

4.317 The Openreach Sales and Product Management team are therefore attributed using Openreach product revenues. We propose that BT should attribute Openreach Marketing and Sales (OUC BR) on the basis of Openreach product revenues by following the same attribution rule to that used by Openreach Sales and Product Management (OUC BP) in 2013/14.

Openreach Transformation (OUC BQ) - [✂ £10m to £50m] (current proposal: Openreach PAC)

4.318 BT told us that this team is responsible for improving efficiency, reducing costs and improving customer satisfaction.[270] This team only provides support to Openreach rather than other lines of business.

4.319 We asked BT whether there was any timesheet or other management information that could be used to attribute these costs. BT said that there was no recorded timesheet information, but that work was recorded against 'programmes' to provide details of what employees had worked on.[271] However, when asked for details of these programmes, BT said that the Transformation team "does not record work against programmes".[272]

4.320 On this basis, we consider that it is difficult to associate the Openreach Transformation team with specific activities because it appears to work across Openreach and looks to improve efficiency in a number of areas (for example through reviewing employee costs, working practices and other types of costs). We therefore consider that Openreach Transformation is a cost with no causality and we propose to attribute it using Openreach PAC.

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[268] BT, Accounting Methodology Document 2014/15, page 44
[269] BT response dated 21 August 2015 (Q4)
[270] BT response dated 5 August 2015 (Q3)
[271] BT response dated 5 August 2015 (Q7)
[272] BT response dated 7 October 2015 (Q26)

Openreach General Counsel (OUC BJ) - [✂ £10m to £50m] (current proposal: Openreach PAC)

4.321 BT told us that this team provides legal and regulatory advice to people mainly in Openreach on all aspects of law and regulation, including the Undertakings, Acts of Parliament and contracts entered into by Openreach.[273] BT also told us that Openreach General Counsel sometimes provided legal advice to the rest of BT, although it did not explain whether this accounted for a significant proportion of the workload in each year.[274]

4.322 Where Openreach General Counsel provides legal advice to lines of business other than Openreach we consider that those costs should be attributed to those lines of business, although we note that this may not be practicable because BT told us that Openreach lawyers do not usually record the time spent on different projects.[275] We have assumed that the majority of costs incurred by Openreach General Counsel are incurred advising Openreach, although we will explore this assumption further with BT. Within Openreach, it is difficult to associate the Openreach General Counsel costs with specific activities because the team provides advice on a range of legal matters, the nature and relative amount of which is likely to vary year to year. We therefore propose to attribute these costs using Openreach PAC.

Openreach Engineering teams (OUCs BL, BV, BK, BI, BD) - [✂ £0m to £10m] (current proposal: Openreach engineering team pay)

4.323 There are a number of engineering teams in Openreach and each team books time, and hence cost, to various 'classes of work' (CoWs). CoWs specify a type of activity or asset type on which engineers are engaged.[276]

4.324 Many CoWs are attributed to plant groups associated with particular assets (and these plant groups are subsequently attributed to components and services). However, some CoWs are generic in nature and so they cannot be attributed directly to plant groups. BT attributes some of these CoWs using COMCOS.

4.325 Table 4.24 shows the engineering teams that have some of their costs attributed using COMCOS. The table indicates that in 2013/14 and 2014/15 the maximum proportion of cost attributed from these teams using COMCOS was 8%, and on average across these teams it was closer to 1%. In both years approximately [✂ £0m to £10m] of cost was attributed using COMCOS.

[273] BT response dated 5 August 2015 (Q3)
[274] BT response dated 5 August 2015 (Q5)
[275] BT response dated 7 October 2015 (Q26)
[276] BT, Accounting Methodology Document 2014/15, page 8

Table 4.24: Percentage of engineering team cost attributed using COMCOS

OUC	Description	% of costs attributed using COMCOS (£m)	
		2013/14	2014/15
BL	Openreach Network investment	4% ([✂] £0m to £10m)	8% ([✂] £0m to £10m)
BV	Openreach Service Delivery	0.2% ([✂] £0m to £10m)	0.4% ([✂] £0m to £10m)
BK	Openreach Next Generation Access	0.4% ([✂] £0m to £10m)	0.0% ([✂] £0m to £10m)
BI	Openreach Frames Congestion	(121%) ([✂] £0m to £(10)m)	0.0% ([✂] £0m to £10m)
BD	Openreach Business & Ethernet	-	3% ([✂] £0m to £10m)
Total		**1% ([✂] £0m to £10m)**	**1% ([✂] £0m to £10m)**

4.326 In 2013/14 the majority of engineering team costs attributed using COMCOS was from two engineering teams: Openreach Network Investment (OUC BL) and Openreach Services Delivery (OUC BV). BT told us that Openreach Network Investment is an operational team that works mainly on capital build programs. Openreach Service Delivery consists of engineers who visit around 30,000 homes and offices every weekday on behalf of Openreach's customers.[277]

4.327 BT told us that the CoWs recorded in these two engineering teams attributed using COMCOS captured the following activities:

- OBREC: Recovery of network equipment, cable and duct. BT told us that in practice this relates mainly to the recovery of redundant decayed poles and street cabinets.[278]
- GENM: time spent on general management support.
- MG: time spent on miscellaneous activities such as time spent with vehicles, administrative paperwork or some types of attempted fault clearance.

4.328 The activities associated with these CoWs could be considered to occur as a consequence of the other functions undertaken by the engineering teams; functions which are often directly attributed to plant groups. For example, while working on cable or duct projects the engineering team may need to spend some time on paperwork, on general management duties and recovering obsolete equipment. We therefore consider that the costs of these CoWs that are attributed using COMCOS are related to the other activities undertaken by these engineering teams and we propose to attribute them using the previously attributed pay costs of these engineering teams.

[277] BT response dated 5 August 2015 (Q3). The other two teams in 2013/14 are Openreach Next Generation Access which plans and deploys NGA in areas funded by BDUK and Openreach Frames Congestion which is a team which cleanses the main distribution frames of ceased jumpers to relieve congestion. The costs attributed from these teams using COMCOS is close to zero.

[278] BT response dated 5 August 2015 (Q14). Note that the recovery of copper is carried out by a different engineering team (OUC BLH) and the costs of this activity are attributed to plant group PG986R (Openreach other activities).

Summary of proposed attribution rules for costs currently included in COMCOS

4.329 Table 4.25 summarises our proposed attribution rules for the Openreach overhead costs currently attributed using COMCOS. We propose four broad attribution rules as shown in the table.

Table 4.25: Proposed attributed rules for COMCOS, 2013/14

Attribution rule	Current proposal £m	Current proposal %
Openreach PAC	[✂] £10m to £50m	52%
Openreach Pay	[✂] £10m to £50m	22%
Openreach product revenues	[✂] £10m to £50m	18%
Openreach engineering team pay	[✂] £0m to £10m	9%
Total	**[✂] £50m to £100m**	**100%**

Definitions of COMCOS attribution rules

4.330 The table below defines the attribution rules proposed for COMCOS. We would be interested in stakeholder comments on these definitions.

Table 4.26: Definitions of proposals for COMCOS

Attribution rule	Proposed definition
Openreach PAC	Costs should be attributed pro-rata to any cost category (e.g. activity group, plant group, residual) that has previously received an allocation of one or more of the following: i) Openreach current pay costs, ii) Openreach non-pay costs (excluding POLOs, other operating income and software capitalisation credits) iii) Openreach capital expenditure at the relevant level and sequencing of the cost allocation system. The pro-rata attribution to each cost category should be based on the total cost in the cost category relating to i), ii) and iii) as a proportion of the total cost of i), ii) and iii) at the relevant level and sequencing of the cost allocation system. This definition of PAC excludes all transfer charges.
Openreach Pay	Costs should be attributed pro-rata to any cost category (e.g. activity group, plant group, residual) that has previously received an allocation of Openreach pay costs (current or capital pay associated with in-year pay costs) at the relevant level and sequencing of the cost attribution hierarchy. The pro-rata attribution to each cost category should be based on the total Openreach pay in the cost category as a proportion of the total Openreach pay at the relevant level and sequencing of the cost allocation system.
Openreach product revenues	Costs should be attributed to services and markets on the basis of the proportion of Openreach product revenues represented by that service and market.
Openreach engineering team pay	Costs should be attributed pro-rata to any cost category (e.g. activity group, plant group, residual) that has previously received an allocation of Openreach pay costs (current or capital pay associated with in-year pay costs) associated with the corresponding engineering team at the relevant level and sequencing of the cost attribution hierarchy. The pro-rata attribution to each cost category should be based on the total Openreach pay of the engineering team in the cost category as a proportion of the total Openreach pay of the engineering team at the relevant level and sequencing of the cost allocation system.

AG409: BT Wholesale general software and AG410: Openreach general software

Introduction

4.331 BT spends a significant amount each year developing software internally or purchasing software externally. For example, BT's statutory accounts show that in 2013/14 and 2014/15 it capitalised over £400m of internally developed software and around £70m of purchased software.[279]

4.332 The costs of developing and purchasing software are initially incurred by BT TSO. Software costs are then attributed to other lines of business where they are generally capitalised. At a high level, within lines of business, software costs (both operating costs and balance sheet entries) are either identified as product- or asset-specific (in which case they can be attributed directly to relevant plant groups), or they are identified as general software costs related to the support functions of that line of business.

4.333 For BT Wholesale and Openreach, the general software costs associated with these lines of business are attributed to AG409 and AG410 respectively.[280] AG409 includes around [✂ £10m to £50m] of general Wholesale software depreciation costs. AG410 includes around [✂ £10m to £50m] of general Openreach software depreciation costs, although as explained below, AG410 also includes a number of other costs unrelated to software.

4.334 Costs in AG409 and AG410 are currently attributed using the Pay and ROA methodology, with AG409 using Wholesale Pay and Wholesale ROA and AG410 using Openreach Pay and Openreach ROA. AG410 therefore attributes costs in a similar way to COMCOS, albeit at a different level of the cost attribution system.[281]

4.335 In the rest of this section we provide a breakdown and explanation of the costs attributed using AG409 and AG410. Where it is possible to identify a causal relationship between these costs and specific activities we propose an appropriate attribution rule. For costs with no causality we propose to attribute costs using either Wholesale PAC (for AG409) or Openreach PAC (for AG410).

AG409 (BT Wholesale general software)

4.336 AG409 includes costs relating to internally developed software and externally purchased software relating to BT Wholesale. Table 4.27 shows a breakdown of software depreciation costs included in AG409 in 2013/14 and 2014/15. In both years approximately 80% of depreciation costs related to internally developed software.

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[279] Note 12, page 166, BT Group plc 2014/15 annual report. Note that not all software costs are necessarily capitalised (see page 152 of the BT Group plc 2014/15 annual report).
[280] Page 130 of BT's 2013/14 DAM says that AG409 and AG410 capture the costs of 'non-specific software depreciation' for BT Wholesale and Openreach respectively.
[281] COMCOS is a base methodology which means it applies to costs recorded in the general ledger. Following the base methodology stage costs from the ledger have been attributed to activity groups, plant groups or residual. AG409 and AG410 take place at the subsequent stage of the cost attribution hierarchy, when a number of activity groups are exhausted to other cost categories. For more information on the sequencing of cost attributions, see Section 3 of the June Consultation.

Table 4.27: Software depreciation costs included in AG409

F8	Description	2013/14 £m	2014/15 £m
458334	Internally developed software	[✂] £10m to £50m	[✂] £10m to £50m
457134	Externally purchased software	[✂] £0m to £10m	[✂] £0m to £10m
Total		**[✂] £10m to £50m**	**[✂] £10m to £50m**

Source: BT response dated 10 August 2015 (Q11).

4.337 BT has found it difficult to provide a comprehensive explanation of the types of software that are included in AG409. The examples it gave of software included in AG409 were: development of systems to comply with the Undertakings, development of a white label call service for CPs who do not have network capability and development work associated with managing a TDM network for specific customers.[282]

4.338 While product specific software should be attributed to the relevant BT Wholesale product, the software costs in AG409 should relate to general BT Wholesale software costs. We consider that non-specific, general software costs cannot be associated with particular products or activities and we propose that they should be attributed on the basis of BT Wholesale PAC.[283]

Definitions of AG409 attribution rules

4.339 The table below defines the attribution rules proposed for costs currently included in AG409. We would be interested in stakeholder comments on these definitions.

Table 4.28: Definition of proposals for AG409

Attribution rule	Proposed definition
BT Wholesale PAC	Costs should be attributed pro-rata to any cost category (e.g. activity group, plant group, residual) that has previously received an allocation of one or more of the following: i) BT Wholesale current pay costs, ii) BT Wholesale non-pay costs (excluding POLOs, other operating income and software capitalisation credits) iii) BT Wholesale capital expenditure at the relevant level and sequencing of the cost allocation system. The pro-rata attribution to each cost category should be based on the total cost in the cost category relating to i), ii) and iii) as a proportion of the total cost of i), ii) and iii) at the relevant level and sequencing of the cost allocation system. This definition of PAC excludes all transfer charges.

Source: BT response dated 10 August 2015 (Q11).

AG410 (Openreach general software)

4.340 In 2013/14, around 40% of the costs in AG410 were associated with internally developed software relating to Openreach. There was only a very small amount of externally purchased software. The majority of the remaining costs included in AG410 were associated with miscellaneous activity carried out by Openreach engineering teams. Table 4.29 shows a breakdown of costs included in AG410 in 2013/14 and 2014/15.

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[282] BT response dated 29 October 2015 (Q11)

[283] Where AG409 currently includes costs relating to software that can be directly allocated to products, BT should ensure that such costs are not included in AG409 in future.

Table 4.29: Software depreciation costs included in AG410

F8	Description	2013/14 £m	2014/15 £m	Proposed attribution
458334	Internally developed software	[✂] £10m to £50m	[✂] £10m to £50m	Openreach PAC
103931	Miscellaneous engineering activity	[✂] £10m to £50m	[✂] £10m to £50m	Engineering team pay
109650	Non-engineering pay	[✂] £0m to £10m	[✂] £0m to £10m	Openreach PAC
209317	Outsourced finance and accounting	[✂] £0m to £10m	[✂] £0m to £10m	Openreach PAC
	Other	[✂] £0m to £10m	[✂] £10m to £50m	Openreach PAC
Total		[✂] £50m to £100m	[✂] £50m to £100m	

Source: BT response dated 10 August 2015 (Q11).

4.341 BT told us that the internally developed software cost attributed to AG410 in 2013/14 included fixed costs associated with testing Openreach software and an engineering tool called Artisan.[284] The examples of Openreach software provided by BT suggest that the software included in AG410 is non-specific and used across Openreach. On this basis we propose to attribute the Openreach software costs included in AG410 using Openreach PAC.[285]

4.342 The second largest category of costs included in AG410 relates to miscellaneous engineering activity. This activity is associated with the MG class of work described in paragraph 4.327. We understand that these particular costs in AG410 are related to the Openreach Service Delivery engineering team (OUC BV). Consistent with our proposal for Openreach engineering team costs currently attributed using COMCOS, we propose that these costs should be attributed using engineering team pay.

4.343 We have not been able to associate the relatively small remaining costs in AG410 with specific activities in Openreach so we propose to attribute them using Openreach PAC.

Summary of proposed attribution rules for costs currently included in AG410

4.344 Table 4.30 summarises our proposed attribution rules for the costs currently attributed from AG409. We propose two broad attribution rules as shown in the table.

Table 4.30 Proposed attribution rules for AG410, 2013/14

Attribution rule	Current proposal £m	Current proposal %
Openreach engineering team pay	[✂] £10m to £50m	37%
Openreach PAC	[✂] £10m to £50m	63%
Total	[✂] £50m to £100m	**100%**

[284] BT response dated 9 October 2015 (Q11). Artisan is described on page 253 of BT's 2013/14 DAM.
[285] Where AG410 currently includes costs relating to software that can be directly allocated to products, BT should ensure that such costs are not included in AG410 in future.

Definitions of AG410 attribution rules

4.345 The table below defines the attribution rules proposed for costs currently included in AG410. We would be interested in stakeholder comments on these definitions.

Table 4.31: Definitions of proposals for AG410

Attribution rule	Proposed definition
Openreach PAC	Costs should be attributed pro-rata to any cost category (e.g. activity group, plant group, residual) that has previously received an allocation of one or more of the following: i) Openreach current pay costs, ii) Openreach non-pay costs (excluding POLOs, other operating income and software capitalisation credits) iii) Openreach capital expenditure at the relevant level and sequencing of the cost allocation system. The pro-rata attribution to each cost category should be based on the total cost in the cost category relating to i), ii) and iii) as a proportion of the total cost of i), ii) and iii) at the relevant level and sequencing of the cost allocation system. This definition of PAC excludes all transfer charges.
Openreach engineering team pay	Costs should be attributed pro-rata to any cost category (e.g. activity group, plant group, residual) that has previously received an allocation of Openreach pay costs (current or capital pay associated with in-year pay costs) associated with the corresponding engineering team at the relevant level and sequencing of the cost attribution hierarchy. The pro-rata attribution to each cost category should be based on the total Openreach pay of the engineering team in the cost category as a proportion of the total Openreach pay of the engineering team at the relevant level and sequencing of the cost allocation system.

Impact of proposed changes to costs currently attributed using the Pay and ROA methodology

June estimates

4.346 In our June consultation we said that the impact of our proposals on costs included in AG112 (corporate costs) and AG103 (TSO support functions) would be to remove around £226m of operating costs from regulated services, as shown in Table 4.32.[286]

Table 4.32: Estimated impact of June proposals to attribution of AG112 and AG103, 2013/14, £m

Markets	Fixed access	Business connectivity	Narrowband	WBA 1 and 2	Residual
Reattribute AG112 and AG103	(155)	(55)	(6)	(10)	226

4.347 These estimates were calculated by Cartesian using a PAC proxy.[287] As we have explained in Section 2, Cartesian was unable to model our actual June proposals and

[286] June Consultation, page 53, Table 8.1
[287] June Consultation, page 53, paragraphs 8.10-8.11

instead used a single attribution methodology based on PAC as a proxy. This meant, for example, that if we proposed to attribute costs using pay or employees, Cartesian only modelled PAC.

4.348 The impacts also only represented operating costs because there was relatively little MCE in AG112 and AG103 compared to operating costs.[288]

Updated estimates to reflect revised proposals

4.349 BT has estimated that the impact of our revised proposals is to remove £184m of operating cost and £52m of MCE from regulated markets. This is shown in Table 4.33.

Table 4.33: Estimated impact of revised proposals for costs currently attributed using Pay and ROA, 2013/14, £m

	Fixed access	Business connectivity	Narrow band	WBA 1 and 2	Residual	Impact on regulated markets
Operating cost	(131)	(40)	(6)	(7)	184	(184)
MCE	(37)	(10)	(3)	(2)	52	(52)

Source: BT estimate dated 15 October 2015.

4.350 In order to aid comparisons to our June Consultation which only included the impact of our proposals on AG103 and AG112, Table 4.34 separately shows the revised operating cost impact on each of the five cost categories.

Table 4.34: Estimated impact of revised proposals for operating costs currently attributed using Pay and ROA, 2013/14, £m

	Fixed access	Business connectivity	Narrow band	WBA 1 and 2	Residual	Impact on regulated markets
AG112 (Corporate overheads)	(114)	(31)	(3)	(3)	151	(151)
AG103 (TSO Support Functions)	(9)	(4)	(2)	(3)	17	(17)
AG103 and AG112	**(122)**	**(36)**	**(4)**	**(6)**	**168**	**(168)**
COMCOS (Openreach overheads)	(3)	(3)	(0)	(0)	7	(7)
AG409 (BT Wholesale general software)	(0)	(1)	(1)	(0)	2	(2)
AG410 (Openreach general software)	(5)	(1)	(0)	(0)	6	(6)
COMCOS, AG409, AG410	**(9)**	**(5)**	**(1)**	**(1)**	**15**	**(15)**
Total	**(131)**	**(40)**	**(6)**	**(7)**	**184**	**(184)**

Source: BT estimate dated 15 October 2015. Note, rows and columns may not sum due to rounding.

4.351 Table 4.35 shows how the estimated operating cost impact on regulated markets of £184m compares to the £226m impact estimated by Cartesian in June. Each row shows the impact of changes we are proposing from our June estimate and builds on the preceding row. Each of the movements shown in the table is explained further below.

[288] June Consultation, page 53, paragraph 8.13

Table 4.35: Estimated impact of proposals for operating costs currently attributed using Pay and ROA, 2013/14, £m

		Fixed access	Business connectivity	Narrow band	WBA 1 and 2	Residual	Impact on regulated markets
1	June PAC proxy	(155)	(55)	(6)	(10)	226	-
2	June PAC proxy (BT)	(155)	(56)	(6)	(9)	227	(1)
3	June actual proposals	(129)	(45)	(6)	(9)	190	37
4	Attribute AG103 to TSO	(138)	(41)	(3)	(4)	187	3
5	Non-pay adjustments	(129)	(39)	(2)	(2)	173	14
6	Define PAC using capex	(133)	(38)	(4)	(4)	179	(6)
7	Amend AG112 drivers	(122)	(36)	(4)	(6)	168	11
8	Add COMCOS	(126)	(39)	(5)	(6)	176	(8)
9	Add AG409	(126)	(40)	(5)	(7)	177	(1)
10	Add AG410	(131)	(40)	(6)	(7)	184	(7)

Source: BT estimate dated 15 October 2015.

- **1. June PAC proxy**. This is the estimate calculated by Cartesian in June using PAC (as defined in June) as a proxy for all of the proposals we made to AG112 and AG103 in June.

- **2. June PAC proxy (BT).** This is the estimate calculated by BT using PAC (as defined in June) as a proxy for all of the proposals we made to AG112 and AG103 in June. BT's estimates using PAC only are very similar to Cartesian's estimates.

- **3. June actual proposals.** This is the estimate calculated by BT using the actual proposals we made to AG112 and AG103 in June. The impact on regulated markets of modelling our actual proposals is smaller than modelling our proposals using a proxy of PAC. BT estimates that the difference is around £37m. The reason for this difference is that of the various attribution rules we proposed to apply to AG112 and AG103 in June (PAC, employees, pay, etc), PAC (as defined in June) attributes the lowest amount to regulated services. By using PAC as a proxy for all our proposals, the impact on regulated markets was overestimated.[289]

- **4. Attribute AG103 to TSO**. In June we attributed AG103 costs using group-wide PAC but we now attribute AG103 costs to TSO costs only; e.g. we now propose to attribute certain costs from AG103 using TSO PAC and not group-wide PAC. Building on row 3, this row shows the impact of attributing AG103 costs to TSO only. It also includes the impact of our proposals relating to CTC costs and TSO HR and Communications costs, which have changed since June. The estimated impact of these changes is to increase the operating costs attributed to regulated markets by around £3m.

- **5. Non-pay adjustments.** In June our definition of PAC included all non-pay costs but our revised PAC definition excludes certain costs from non-pay (POLOs, other operating income and software capitalisation credits). Building on

[289] Broadly, PAC (as defined in June) attributes around 20% of costs to regulated services while our actual June proposals attribute a weighted average of around 25% to regulated services (the actual proportions for AG112 and AG103 are slightly higher and slightly lower than 25% respectively). The difference between the attributions of c5% multiplied by total costs in AG112 and AG103 ([✂ £500m to £1bn]) is c£39m, close to the £37m difference estimated by BT.

row 4, this row shows the impact of our non-pay adjustments. The estimated impact of this change is to increase the operating costs attributed to regulated markets by around £14m.

- **6. Define PAC using capital expenditure.** In June our PAC definition included pay, non-pay and CCA depreciation (including holding gains) but our revised definition of PAC includes capital expenditure rather than depreciation. Building on row 5, this row shows the impact of including capital expenditure in PAC. The impact of this change is to reduce the operating costs attributed to regulated markets by around £6m.

- **7. Amend AG112 drivers.** Building on row 6, this row reflects the changes to specific attribution rules in AG112 for Insurance, Group HR, Learning Academy and the SSO team. The impact of this proposal in 2013/14 is to increase the operating costs attributed to regulated markets by around £11m, the majority of which (80%) relates to our insurance proposals. Note that this row also indicates what our June proposals would have looked like taking into account the updates included in this section (i.e. new definition of PAC, AG103 being attributed to TSO only, and updated attribution rules for certain costs in AG112).

- **8. Add COMCOS**. In this consultation we have proposed new attribution rules for the costs currently attributed using COMCOS (Openreach overheads). Building on row 7, this row shows the impact of this proposal in 2013/14 is to reduce the operating costs attributed to regulated markets by around £8m.

- **9. Add AG409**. In this consultation we have proposed new attribution rules for the costs currently attributed via AG409 (BT Wholesale general software). Building on row 8, this row shows the impact of this proposal in 2013/14 is to reduce the operating costs attributed to regulated markets by around £1m.

- **10. Add AG410**. In this consultation we have proposed new attribution rules for the costs currently attributed via AG410 (Openreach general software). Building on row 9, this row shows the impact of this proposal in 2013/14 is to reduce the operating costs attributed to regulated markets by around £7m.

4.352 For the purposes of our statement, we expect BT to calculate the impact of our decision on the attribution of these costs on a 2014/15 basis so that the impact on business connectivity services can be reflected in the leased lines charge control statement.

Consultation questions

Question 4.1: Do you agree with our assessment that the Pay and ROA methodology is inappropriate? Please provide your reasons.

Question 4.2: Do you agree with our proposed definition of PAC to apply to costs which have no causality? Specifically, do you agree with our proposal to include capital expenditure in our definition, rather than an alternative measure of capital cost such as depreciation or ROA?

Question 4.3: Where we have identified causality for costs currently attributed using the Pay and ROA methodology, do you agree that i) causality can be identified with these costs and ii) our proposed attribution rule is appropriate?

Section 5

Property and electricity

Introduction

5.1 In this section we consider the rules that BT uses to attribute property and electricity costs. In the June Consultation we did this in two separate sections: Floor Space Utilisation (and the treatment of vacant space); and Power Consumption for TSO and Openreach. However, electricity and property costs are currently attributed within BT's Regulatory Financial Statements from the same activity group and share some common assumptions. We consider these rules together in this consultation but explain that we think that they should be attributed separately.

5.2 Property and electricity costs accounted for just over [✂ £500m to £1bn] of BT's costs in 2013/14. Property costs include the costs of running and maintaining BT's property estate in the UK, including its offices, exchange buildings, computer centres and motor transport workshops. Electricity costs are incurred within both offices, operational buildings and in some cases at NGA street cabinets.

5.3 In this section, we explain that we consider certain aspects of the way BT attributes property and electricity costs to be inappropriate. This has led us to make various proposals on how they should be attributed in the future.

5.4 In respect of property costs we propose alternative attribution rules as:

- We consider that the way BT attributes the cost of vacant space in operational buildings with an MDF is not appropriate (in June we proposed that it was appropriate);[290] and

- We now consider that the way BT marks up the space of LLU hostels is inappropriate.

5.5 In this document, we do not revisit our June proposal that the treatment of non-chargeable vacant space was inappropriate, but make some minor wording changes to our June proposal.

5.6 In respect of electricity costs, we explained in June that BT had recently proposed changes to the way it allocated TSO electricity costs. We also explained we had not concluded whether the way BT attributed these costs was appropriate. We provisionally consider the current methodologies inappropriate and propose that BT should make the changes it has proposed. We also identify one further change that we consider should be made.

5.7 We said in June that we considered the way BT attributed Openreach power costs to be appropriate. We do not revisit that proposal here.

[290] June Consultation, page 86, paragraph 9.68

Background

5.8 Property and electricity costs are included in three activity groups: AG106 (Group Property and Facilities Management Costs), AG412 (BT Property Fixed Assets) and AG414 (Property Provision)).

- AG106 (Group Property and Facilities Management) contains BT's electricity costs and most property costs. The latter include facilities management costs on all buildings, any non-Cumulo rates costs and external rental payments on non-BT owned buildings,[291] Other property costs are attributed from AG412 (BT Property Fixed Assets) and AG414 (Property Provision). The costs within AG106 (Group Property and Facilities Management) are attributed using data from all internal transfer charges raised by BT Group Property.

- AG412 (BT Property Fixed Assets) contains capital costs (depreciation and mean capital employed) associated with all of BT's buildings. This includes the result of all capital expenditure on these buildings but also land and building costs buildings that BT owns.[292] The costs within AG412 (BT Property Fixed Assets) are attributed using BT Group Property's internal transfer charges for BT owned buildings).

- AG414 (Property Provision) contains costs of leasehold buildings, generally offices, for which BT has made an onerous lease provision and which it no longer intends occupying. In most years these costs are small and are mainly negative mean capital employed. The costs within AG412 (Property Provision) are attributed using BT Groups Property's charges for Office and General Purpose buildings.

5.9 BT Group Property calculates internal transfer charges for property costs using occupied floor space. Transfer charges for electricity costs are based on occupied floor space and the type of space occupied. For example areas housing equipment are allocated a higher proportion of a building's electricity costs.

5.10 Occupation of space within BT buildings is recorded within BT's Horizon system.[293] Space is classified as being either Office or Specialised. Specialised space includes all operational space. While most specialised space is in telephone exchange buildings some is found in other buildings such as computer buildings and motor transport workshops. Horizon also records different types of space within exchange buildings. So for example space housing equipment is separately identified from other space, such as MDF or cable chamber areas. Any space in exchange buildings that is used as offices is classified as being Office space.

5.11 AG106 (Group Property and Facilities Management) has separate attribution bases for specialised space and for office space. There are also separate attribution bases for specialised electricity and specialised property costs. Nevertheless, property and electricity costs for offices are attributed together.

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[291] The majority of BT building have been sold to TelerealTrillium and leased back.
[292] The majority of BT building have been sold to TelerealTrillium and leased back.
[293] BT's Horizon system records space utilisation in both operational buildings, such as telephone exchanges, and in office and other general purpose buildings, by each line of business. Horizon is also updated on regular basis when changes in building occupancy and/or usage have been completed.

The need for separate attribution methodologies for property and electricity costs

5.12 BT currently attributes electricity and most property costs within Activity Group AG106. Under the current methodology the attribution of both electricity and property costs is based on information derived from BT Property's transfer charge system. These transfer charges are based on budgeted costs, but AG106 attributes incurred electricity plus property costs. Any variances between transfer charges and actual costs are "smoothed" across both areas.

5.13 We consider that the current methodology of attributing property (including rental, rates and facilities management costs) and electricity costs within the same activity group is neither causal nor objective. Neither electricity nor property costs are attributed in accordance with the activities that cause the costs to be incurred.

5.14 When discussing the modelling of electricity changes BT proposed separating electricity costs out of AG106 and attributing these separately. We consider that BT's proposal to separate the attribution of electricity and property costs is objective as it takes account of all available information. We therefore consider that BT's proposal to separate the attribution of electricity and property costs should be adopted.

The attribution of property costs

5.15 In light of stakeholder responses to the June consultation we have undertaken a further review of the way that BT attributes property costs.

5.16 We set out our understanding of the way BT attributes these costs. In particular, we consider the way BT estimates a cost of the unused space in some operational buildings and attributes this cost entirely to Openreach. We explain that we do not consider either the calculation of the cost or the way BT attributes the cost to Openreach is appropriate.

Background on the attribution of the costs of vacant space

5.17 In June, we noted that BT's attribution of property (including vacant space) costs is complex.

5.18 BT's 2015 Accounting Methodology Document provides some detail on the attribution of these bases on pages 126-127 and 136-137. With respect to the treatment of vacant space the Accounting Methodology Document notes that:

> "Empty space in operational buildings is charged to Openreach. This is because the high costs and the disruption to services that would be incurred in moving cable chambers and main distribution frames prevents us from reducing the size of the operational building portfolio. Empty space in office buildings is not recharged to the LOBs but the costs are included in AG106."[294]

[294] BT, Accounting Methodology Document 2015, page 126

5.19 The Accounting Methodology Documents' description of the treatment of empty space in operational buildings is not accurate. It is only in operational buildings with a Main Distribution Frame (MDF) that empty space is charged to Openreach. BT refers to this as the Anchor Tenant principle. We adopted that term in our June consultation and continue to use it here.

5.20 In operational buildings with an MDF BT's Horizon system is used to identify space belonging to TSO first and then space utilised by Openreach. The latter is split into four different categories: MDF, Cable Chambers, LLU hostels, and Other. LLU hostel areas are marked-up to allow for future demand. Any remaining vacant space is then attributed to the plant groups receiving costs from MDF and Cable Chambers, i.e. to Openreach. The "Other" category does not receive an allocation of vacant space costs.

5.21 However in operational buildings without a MDF most vacant space is not charged to the Line of Business (LOB) but the costs are, as for Office buildings, also included in AG106 (Group Property and Facilities Management).

What we said in June

5.22 As part of our assessment in June, we considered the following three issues:

- *The treatment of non-chargeable vacant space*. The costs of this space, which are mainly in office buildings, are recovered within AG106 (Group Property and Facilities Management). They are however effectively attributed across all building types, including operational buildings with an MDF, in which vacant space had been attributed to Openreach under the Anchor Tenant principle. We considered the treatment of non-chargeable vacant space inappropriate. We proposed that BT should attribute property costs separately by building type, including non-chargeable vacant space, on the basis of the transfer charges for that building type.

- *Application of the Anchor Tenant principle in operational buildings with an MDF.* We considered BT's justification for this attribution introduced in the 2012/13 Regulatory Financial Statements did not seem inappropriate.

- *The mark-up of space of LLU Hostels in operational buildings with an MDF*. We noted that BT currently marks up LLU hostel space by [✂ 40% to 45%] to allow for future growth but does not then attribute any of the remaining vacant space to these areas. We noted the mark-up was based on data that was out of date and expected BT to provide us with evidence on how frequently the data should be updated with a view to taking more prescriptive action in the future.

Stakeholder responses to the June consultation

5.23 We received responses from BT who said it would work with us to consider alternative approaches, and from Vodafone and TalkTalk.

5.24 Vodafone agreed that "allocating vacant space within non-chargeable areas across all building types (i.e. both General Purpose Buildings and Operational Buildings) is neither casual nor objective and is therefore obviously inappropriate". It found "the allocation basis proposed by Ofcom is broadly reasonable".[295] However, Vodafone disagreed that vacant space in Operational Buildings with an MDF should be attributed in line with the Anchor Tenant principle, arguing that:

- "This treatment was inconsistent with our treatment of the sales of property which is based on the "past use of those properties … From that perspective the vacant space in local exchanges is primarily attributable to TSO, not Openreach: it is TSO assets (Switches, etc) whose space requirement has shrunk significantly since the local exchanges were constructed, not Openreach assets".[296]

- "Vacant Space in these buildings is incremental to neither TSO nor Openreach activities. It is therefore a common cost between TSO and Openreach and so "should be treated accordingly, not allocated solely to one of the two".[297]

- Even if a forward looking cost analysis were to be adopted to reflect "transition costs" for these buildings it would be wrong to attribute all costs to Openreach. There are transition costs associated with TSO assets as well as Openreach assets.[298]

5.25 However, most of TalkTalk's comments concerned the attribution of vacant space in operational buildings with an MDF according to the Anchor Tenant principle. In arguing that the Anchor Tenant principle was inappropriate TalkTalk referred to its December 2013 response to the Fixed Access market review consultation.[299] It restated several of the points that it had made in that submission.[300]

5.26 TalkTalk firstly argued that it is wrong to treat vacant space as somehow "caused" by the MDF. Vacant exchange space is what TalkTalk describe as a "deadweight cost". The cost would not be incurred by an efficient modern entrant, but reflects that BT's exchange buildings were mainly acquired when telecoms equipment was much bulkier than modern equipment, notably Strowger equipment to provide public switched services. Hence it could be argued that PSTN equipment caused the additional costs. TalkTalk said that "trying to blame one factor for the vacant space is a futile exercise – there are multiple causes."[301]

5.27 Even if it were correct to conclude that current activities "caused" the vacant space (which TalkTalk did not accept) "then it would be wrong to presume that it is all caused by MDF/cable chambers". TalkTalk then said that effectively "BT is assuming that if it were not the for the MDF/cable chambers any exchange which has vacant

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[295] Vodafone, June Consultation response, page 13, paragraph 4.1
[296] Vodafone, June Consultation response, page 14, paragraph 4.5
[297] Vodafone, June Consultation response, page 14, paragraph 4.6
[298] This is a simplification of Vodafone's argument which is provided in more detail in paragraphs 4.7-4.8 of its response, page 14.
[299] BT's Regulatory Financial Statements: submission on changes proposed by BT, TalkTalk response, 10 December 2013 http://stakeholders.ofcom.org.uk/binaries/consultations/llu-wlr-cc-13/responses/TalkTalk_Group_BTs_Regulatory_Financial_Statements.pdf
[300] TalkTalk's December 2013 submission was a response in relation to BT's changes within its 2013 Regulatory Financial Statements. However, Ofcom decided that it would not be appropriate to use the allocation methodologies within the 2012/13 Regulatory Financial Statements for the purpose of the 2014 Fixed Access and Wholesale Broadband Access charge controls and did not therefore undertake a detailed evaluation of the new attribution methodologies introduced in the 2012/13 Regulatory Financial Statements, including the Anchor Tenant principle.
[301] TalkTalk, June Consultation response, pages 17-18, paragraph 3.76

space would be moved to a new, smaller building with no vacant space at zero cost."[302] TalkTalk considered that assumption "implausible", and that "there will be many exchanges which would not be closed even if there were no costs of moving MDFs and cable chambers."[303]

5.28 TalkTalk gave two reasons for this:

- First, "there will be some exchanges for which the benefits of moving are very low". There may be minimal vacant space or there may be costs that "may also make it more costly to move exchange than to remain in an exchange with vacant space", such as sub-tenants with onerous break clauses or the availability of cheaper rental prices for new properties.[304]

- Second, "there will be other substantial costs of moving exchanges beyond the costs of moving MDFs and cable chambers" notably those of moving equipment and re-routing fibre optic cables. "In many cases these costs, and other costs of moving exchanges, will be higher than the (capitalised) benefits in terms of lower rents from moving exchanges". [305]

5.29 TalkTalk then noted that BT "adduces no evidence that all, or even most, exchanges which have been unbundled but retain vacant space would be moved if there were no costs of moving MDFs and cable chambers."[306]

5.30 As "there is no cost causality in allocating all of the vacant exchange space to MDFs and cable chambers, as they are not the sole cost driver."[307] TalkTalk's conclusion was that "it would be incorrect to attribute all of the cost of vacant space to MDF and cable chambers. A more robust assumption would be to attribute the cost of vacant space in proportion to the usage of non-vacant space."[308]

5.31 TalkTalk's final observations were that:

- This attribution (the Anchor Tenant principle), "appears to allow LLU to be attributed space costs for exchanges that are not and never will be unbundled."[309]

- "More generally the way in which property costs are attributed appears to be very complicated and a 'mess' and/or transparency is very poor."[310]

Previous stakeholder responses

5.32 We have reviewed afresh stakeholders' responses made about BT's introduction of the Anchor Tenant principle as part of the changes that it introduced to attribution methodologies in its 2012/13 Regulatory Financial Statements.

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[302] TalkTalk, June Consultation response, page 18, paragraph 3.77
[303] TalkTalk, June Consultation response, page 18, paragraph 3.78
[304] TalkTalk, June Consultation response, page 18, paragraph 3.79
[305] TalkTalk, June Consultation response, page 18, paragraph 3.80
[306] TalkTalk, June Consultation response, page 18, paragraph 3.80
[307] TalkTalk, June Consultation response, page 18 , paragraph 3.80
[308] TalkTalk, June Consultation response, page 18, paragraph 3.82
[309] TalkTalk, June Consultation response, page 18, paragraph 3.83
[310] TalkTalk, June Consultation response, page 18, paragraph 3.84

5.33 By way of background Ofcom decided that it would not be appropriate to use the allocation methodologies within the 2012/13 Regulatory Financial Statements for the purpose of the 2014 Fixed Access and Wholesale Broadband Access charge controls. As a result we did not undertake a detailed evaluation of the new attribution methodologies introduced in the 2012/13 Regulatory Financial Statements, including the Anchor Tenant principle.

5.34 TalkTalk's December 2013 submission was a response dedicated to BT's changes within its 2013 Regulatory Financial Statements.[311] Its comments on the Anchor Tenant principle were consistent with those summarised above.

5.35 Sky and the Berkeley Research Group (BRF) mentioned their concerns about the Anchor Tenant principle within their more general responses to our December consultation.

5.36 Sky said the attribution of vacant exchange space was flawed as "it implies that, were there not MDFs and cable chambers, then BT would be able to reduce its exchange costs. But BT has provided no evidence to support this implicit assumption and, as such, this change appears to be less causal than the previous method."[312]

5.37 BRF, in a report for BSkyB, Vodafone, COLT, TalkTalk and Verizon, said that "it appears disproportionate to state that the reasons for not moving facilities are entirely based on the needs of LLU, MDF and cable chambers". This treatment was of several methodology changes that "our analysis suggests that… are not supported by the principles of cost causality."[313]

5.38 BT did not agree with Ofcom's approach not to use the 2012/2013 Regulatory Financial Statements in its 2014 charge controls. BT felt that "absent a clear and specific reason for rejecting each change, on a case by case basis, Ofcom should include that change, it being the most appropriate and up to date information."[314] It submitted a report by Deloitte[315] ("The Deloitte RFS report") to support its case that these attributions were reasonable.

5.39 Within this report Deloitte considered the attribution of vacant space in exchanges. It noted that "the attribution of the majority of the costs of vacant space is made on the basis that it is these assets, in particular, that could not be relocated economically if

[311] TalkTalk, BT's Regulatory Financial Statements: submission on changes proposed by BT, TalkTalk response, 10 December 2013 http://stakeholders.ofcom.org.uk/binaries/consultations/llu-wlr-cc-13/responses/TalkTalk_Group_BTs_Regulatory_Financial_Statements.pdf. TalkTalk's comments on the Anchor Tenant principle are given in Section 5.

[312] Sky, Paragraph 3.18 of Sky's response to the charge control elements of Ofcom's December 2013 and January 2013 Consultation, http://stakeholders.ofcom.org.uk/binaries/consultations/famr-2014/responses/Sky__FAMR_Charge_Controls.PDF

[313] BRF, "BT's Regulatory Financial Statements 2012/13," Page 2 of the Executive Summary of report http://stakeholders.ofcom.org.uk/binaries/consultations/fixed-access-market-llu-wlr-charge-controls/responses/Colt_and_Vodafone_-_BRG_Report_on_BT_RFS.pdf

[314] BT, response to Ofcom's consultation of 19 December 2013 and 16 January 2014, paragraph 25 http://stakeholders.ofcom.org.uk/binaries/consultations/fixed-access-market-llu-wlr-charge-controls/responses/BT_Group.pdf

[315] Deloitte, BT RFS Attribution Methodology Changes, 15 October 2013. http://stakeholders.ofcom.org.uk/binaries/consultations/fixed-access-market-llu-wlr-charge-controls/responses/BT_Group_-_Deloitte_Report_on_BT_RFS_Attribution_Methodology_Changes.pdf

BT were to adopt a property rationalisation programme with a view to reducing the amount of vacant space."[316]

5.40 Deloitte reviewed BT's new methodology against BT's Regulatory Accounting Principles[317] and found that "this revised methodology reflects a key driver of the current need to maintain vacant space."[318] For Objectivity Deloitte found that "irrespective of the objective basis for the change in methodology, the effect in terms of attribution of costs to key access network assets is likely to raise a challenge as to whether the revised methodology is objective in purpose and outcome."[319]

5.41 Deloitte concluded that "the required methodology seeks to align cost attribution with the reasons why vacant space is required to be maintained and therefore can be considered to be an improvement on the previous methodology."[320]

5.42 We have also considered the views of PriceWaterhouseCoopers (PWC), the auditors of BT's regulatory accounts, about vacant exchange space. These were provided to Ofcom in private as part of PWC's presentation to a meeting prior to the publication of the 2013 Regulatory Financial Statements between BT, PWC and ourselves. PWC did not appear to object to this change:

> "[✂]" [321]

Our assessment

5.43 In light of stakeholders' comments, we have considered our June assessment and proposals in relation to vacant space as follows:

- *The treatment of non-chargeable vacant space*. We are not revising our proposed assessment in relation to the treatment of non-chargeable vacant space in this Consultation but we have made minor changes to the wording of our proposal in the light of further information from BT.

- *Application of the Anchor Tenant principle in operational buildings with an MDF*

We did not consider that BT's adoption of this principle was inappropriate. As we explain below, in light of stakeholders' responses, we now consider that this principle is inappropriate and propose an alternative attribution rule.

- *The mark-up of space of LLU hostels in operational buildings with an MDF*

In the June Consultation we said that we expected BT to investigate and provide us with further evidence in relation to the calculation of the mark-up. Having assessed this attribution in the light of our proposed rejection of the Anchor Tenant principle, we consider that it is inappropriate and propose an alternative attribution rule.

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[316] Deloitte, BT RFS Attribution Methodology Changes, 15 October 2013, page 32, paragraph 11.2
[317] These Regulatory Accounting Principles were replaced by new principles in March 2015.
[318] Deloitte, BT RFS Attribution Methodology Changes, 15 October 2013, page 33, Table 22
[319] Deloitte, BT RFS Attribution Methodology Changes, 15 October 2013, page 33, Table 22
[320] Deloitte, BT RFS Attribution Methodology Changes, 15 October 2013, page 33, paragraph 11.2.2
[321] PWC presentation to 26 July 2013 Tripartite meeting: BT Regulatory financial statements, Audit status and findings. Slide 13.

5.44 In addition, we consider the issue raised by TalkTalk concerning the attribution of space in exchanges that have not been unbundled. Our provisional assessment is that BT's current methodology is not inappropriate.

5.45 Our review of BT's cost attribution methodologies has not considered how costs including forward looking costs of an efficient operator are recovered. That is a matter for charge controls.

Treatment of non-chargeable vacant space

5.46 Our view remains that the treatment of non-chargeable vacant space is inappropriate. However we now understand that BT attributes property costs by type of space rather than by building type. We have therefore updated our June proposal and now propose that BT must attribute property costs separately by type of space.

5.47 As a consequence of our proposals on the Anchor Tenant principle BT may need to change the information that supports the transfer charges for each type of space.

5.48 We explain the reason for this below. Our proposal is now therefore that BT must separately identify and separately attribute the costs for each type of space. These costs should include the costs of non-chargeable vacant space.

Application of the Anchor Tenant principle in operational buildings with an MDF

Is the current methodology inappropriate?

5.49 To attribute costs of an office building (or an operational building without a MDF), BT attributes the costs to divisions that use the building according to the amount of the floor-space they use. Where there is spare capacity in these buildings, the costs of the spare capacity are shared across divisions in proportion to the total space they use in all buildings.

5.50 To attribute costs of an operational building with an MDF, BT also attributes the costs to divisions in line with the floor space used by the BT divisions in that building. However, where there is spare capacity in such an operational building, BT treats this vacant space as if it was being used by Openreach. This results in a high proportion of costs being attributed to BT's regulated access business than would be the case if BT adopted the methodology it used for vacant space in office buildings.

5.51 BT's methodology appears to imply that vacant space in operational buildings with an MDF has a cost to BT equal to the costs it has allocated to that space and that cost has been caused by Openreach. As explained below, BT has not demonstrated this to be the case.

5.52 We consider that there may be an argument that the presence of Openreach equipment in that building has caused BT to incur increased property costs if all of the following statements are correct:

- BT was using a building that was larger than it needed;
- moving to a smaller building would be cheaper;
- the only reason BT could not move to the smaller, cheaper, building was the presence of Openreach equipment that in turn made that move impossible; and

- absent that reason, BT would already be in the cheaper building and already incurring the lower costs.

5.53 However, as we explain below, BT has not demonstrated that these statements are correct. Instead, we consider it likely that:

- *BT would still be using some of these buildings in any event.* It is not clear that BT is only being prevented from vacating these buildings by the presence of Openreach equipment and it is possible that BT would still be using at least some of these buildings even if it was able to vacate them, in which case the Openreach equipment would not be the sole cause of BT remaining in all of these buildings; and

- *The cost caused by remaining in the other buildings is less than BT's methodology implies.* Even where the presence of the Openreach equipment may be the sole cause of BT remaining in any buildings, BT's attribution methodology is not a good measure of the costs this may cause.

BT would still be using some of these buildings in any event

5.54 It appears that the Anchor Tenant principle is based on two assumptions. First, BT would have vacated all exchanges had not it been for Openreach equipment, and second, the costs and difficulty of moving cable chambers and MDF facilities would be the deciding factors to consider for each and every exchange. We have not seen any evidence to support this.

5.55 On the first point, it seems unlikely that BT would have vacated all exchanges with vacant space already or would plan to do so, even in the medium to long term.

5.56 It is unlikely that all vacant space in exchanges can be avoided. No exchange is likely to be exactly the size required, without any spare capacity, nor would this be desirable. Vacant space might be needed to provide room for systems expansion, or might grow as systems are miniaturised through technological change. So the existence of some vacant space would not necessarily lead to BT wanting to vacate an exchange building.

5.57 Some exchanges are key sites that form the backbone of its network. Openreach has 106 major nodes that it calls Optical Handover Points[322] and around 1100 Access Service Nodes.[323] There are over 4,000 FTTC enabled BT exchanges.[324] The presence of other CPs who have installed equipment to provide their own services at over 3,000 exchange sites would be a further complicating factor.

5.58 Second, the relative importance of factors that need to be considered might differ between sites. Even if BT were able to demonstrate that the costs of moving cable chambers and MDF facilities was the deciding factor for the relatively few exchanges that it has vacated, other factors would need to be considered. For example, there

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[322] Business Connectivity Market Review, May 2015, paragraph 4.189, http://stakeholders.ofcom.org.uk/binaries/consultations/bcmr-2015/summary/BCMR_Sections.pdf

[323] See for example paragraph A16.27 of Annex 16 of the May 2015 Business Connectivity Market Review, http://stakeholders.ofcom.org.uk/binaries/consultations/bcmr-2015/annexes/BCMR_Annexes_Non_Confidential.pdf

[324] 4,284 as at 29/10/2015. The SamKnows website is at: https://www.samknows.com/broadband/exchanges/bt/fttc

will be costs of moving equipment and rearranging inter-exchange network routes. As TalkTalk argues, there will also be other factors to consider such as the extent of any vacant space and availability of suitably priced property in a convenient and appropriate location.

The additional cost caused by remaining in these buildings, if any, may be less than BT's methodology suggests

5.59 Given that some spare capacity is likely (or even desirable) in any operational building, it is not clear that vacant space can be said to cause costs.

5.60 However, even if it could be shown for some or all operational buildings with any vacant space that (i) BT would have already moved out of these existing buildings if it had not been for the presence of Openreach equipment, and (ii) that property costs would be lower as a result, we do not consider that the hypothetical cost saving could be reliably estimated by pro-rating the current property cost between used and vacant space.

5.61 Specifically, we have no evidence that the property cost would reduce in proportion to the size of the building.

5.62 By way of illustration, assuming BT is currently using 80% of the space in one of its operational buildings, we have already explained why we do not think it follows that BT would have already vacated the building and already be working in smaller premises.

5.63 Nor does it follow that, if BT moved to alternative premises, the cost of the 20% smaller premises would be 20% less than the cost of the original premises. It is possible that the cost of new alternative (smaller) new premises would be similar to (or more than) the cost of the current (larger) premises. In these circumstances, it could not be said that the equipment has caused the 20% of the cost of the premises that BT had allocated to the vacant space (in addition to the cost BT had already allocated to that equipment in proportion to the space it actually used).

5.64 We do not therefore consider that Openreach can be said to have caused the proportion of the costs of operational buildings that BT has attributed to the empty space in those buildings. Absent evidence to the contrary it therefore seems that the Anchor Tenant principle is not causal because it attributes the proportion of costs that BT has allocated first to vacant space solely to Openreach.

The Anchor Tenant principle is not consistent with other attribution methodologies

5.65 One of the Regulatory Accounting Principles is Consistency of the Regulatory Financial Statements as a whole.

5.66 We agree with TalkTalk and Vodafone that most vacant space in an exchange is likely to be a reflection of the changed nature of equipment. At the time exchanges were built, network equipment, notably PSTN switching equipment, occupied far more space than modern equipment. Using this historic approach to cost causality would not however be consistent with approaches that we use for other assets. For example, when we consider the attribution of duct or fibre costs we do not consider what caused that duct or fibre to be originally installed. We do not attribute the costs of any spare duct or fibre on the basis of the original use of the duct or the fibre cable. Instead, the approach is to spread the costs in proportion to the occupied duct or the fibres cables that are in use.

5.67 The attribution of the costs of vacant space under the Anchor Tenant principle is not consistent with the attribution of costs of other underused or redundant assets. For example, the costs of spare capacity in duct space and in fibre cables are attributed on the basis of the current services that use those ducts or cables. The costs of moving underused ducts or cables on which there is spare capacity are not considered nor whether there is an anchor tenant of these assets.

5.68 Furthermore the Anchor Tenant principle is not consistent with our proposal for the way that proceeds of sales of core and backhaul copper, and sales of (redundant) property redundant assets should be attributed. We propose that these costs should be attributed in the same way that costs of similar assets are attributed: core and backhaul fibre in the case of core and backhaul copper sales, the rental costs for similar buildings in the case of sales of property. There is no consideration of whether there is an anchor tenancy or service for these assets.

Our provisional conclusion on the Anchor Tenant principle

5.69 We therefore consider that the Anchor Tenant principle is not objective, consistent with other attribution methodologies or causal and for these reasons we consider that it is inappropriate.

Proposal for attributing vacant space within operational buildings with an MDF

5.70 We propose that vacant space within operational buildings with an MDF must be attributed in the same way that non-vacant space is attributed in that exchange. The effect of this proposal together with our proposal for non-chargeable vacant space would be to make attribution of vacant space consistent across types of space within all of BT's buildings. It would also make the treatment of vacant space consistent with the treatment of other under-used and redundant assets. This proposal removes the attribution of vacant space under the Anchor Tenant principle.

5.71 Information within Group Property's transfer charging provides a reasonable starting point from which to base attributions for BT's regulatory accounting system as it contains detailed data on the space utilisation and the costs within each building. However, BT Property's transfer charges were changed in 2013/14 to reflect the Anchor Tenant principle.

5.72 Implementing our proposal to attribute vacant space within operational buildings in the same way that non-vacant space is attributed may therefore require changes to BT Property's current transfer charges if this data is to form the basis for attribution of property costs.

5.73 Our previous proposal for non-chargeable vacant space had been that BT should attribute property costs separately by building type on the basis of the transfer charges for that building type. As changes may need to be made to these transfer charges we have revised our proposal for the attribution of non-chargeable vacant space to remove the reference to transfer charges.

Mark-up for LLU hostel areas

Is the current methodology inappropriate?

5.74 It is not clear why LLU hostel areas should be marked-up for future growth while equipment areas owned by TSO are not. While some justification for this "forward looking approach" might have existed when large numbers of local exchanges were being unbundled and demand for unbundling services was growing rapidly there seems little current justification. The continued adoption of a large [✂ 40% to 45%] mark-up based on forecasts from 2012[325] seems biased and not to be objective.

5.75 Our rejection of the Anchor Tenant principle through our proposal that vacant space must be attributed in the same way that non-vacant space is attributed in that exchange would also lead to an inconsistent treatment of vacant space if LLU hostel space continued to be marked-up.

5.76 We therefore consider that the current methodology for attributing costs of operational space to LLU hostel areas is not objective because it takes account of redundant information that results in costs for LLU hostel areas being overstated.

Proposal for application of a mark-up to LLU hostel areas

5.77 In respect of the application of a mark-up to LLU hostel areas, we propose that LLU hostel areas should be treated the same way as any other areas within operational buildings and so the current space requirements should not be increased to reflect any potential future growth.

Attribution of costs in exchanges that have not been unbundled

5.78 TalkTalk raised a potential objectivity concern that the current attribution "appears to allow LLU operators to be attributed space costs in exchanges that are not and never will be unbundled."[326]

5.79 For LLU hostel areas there do not appear to be grounds for such concerns. Under both the current and our proposed attribution methods these areas should only attract costs from exchanges that are unbundled. As space costs are allocated within each exchange LLU hostel areas should not be attributed any space in exchanges that have not been unbundled.

5.80 The situation is less clear for costs that may be shared across, for example, both WLR and MPF rental services such as the costs of MDF or cable chamber areas. The costs of several components used to provide WLR and MPF rental services will include the property costs in those exchanges that have been unbundled as well as the costs in those that have not. Even under our proposals it would therefore still be the case that the costs of MPF rentals services, for example, would continue to include attributions of space costs in exchanges that have not been unbundled.

5.81 To attribute costs in exchanges that had been unbundled separately from costs in those that have not been unbundled would however introduce considerable complexity into BT's regulatory financial reporting systems. It would require the introduction of new sets of plant groups, components and usage factors for unbundled and non-unbundled exchanges and require BT to record costs, operational data and volumes separately for those different types of exchange areas.

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[325] We explained in paragraph 9.66 of the June consultation that this uplift was calculated in 2012 using a forecast of future PoPs provided by CPs to Openreach. This was used to forecast the increase in LLU space requirements between 2012 and 2017.
[326] TalkTalk, June Consultation response, page 18, paragraph 3.84

5.82 Further, it is not clear how (or in which direction) the current approach under which costs are averaged across all exchange areas, affects the allocation of costs to regulated markets. The relativity of property unit costs in unbundled exchanges compared to those that have not been unbundled will be affected by several factors, including:

- Rental charges. Exchanges that have been unbundled tend to be in relatively more urban areas where rental charges would be higher.
- The scale and scope of services provided. Exchanges that have been unbundled tend to have more connections and be used to provide a wider range of services. This might lead to lower relative space costs.
- The extent of any vacant space. Extent of vacant space is likely to be affected by the range of services offered, the uses of the exchange building (for example how much space may have been converted to offices) and the previous volume of PSTN equipment (which will have been influenced by demand projections when the exchange was originally acquired). The extent of vacant space is therefore likely to vary significantly across exchanges.

5.83 It is unclear whether unit property costs for access services would be lower in unbundled exchanges than in exchange buildings that have not been unbundled. Further given that a large proportion of exchanges have now been unbundled the extent to which it allocates more or less cost to regulated markets, is likely to be small.[327]

5.84 On the basis that attributing costs in unbundled exchanges separately from those that have not been unbundled would add considerable complexity and that such a change may well be impractical the current methodology seems objective. As such have no grounds to consider that attributing the property costs of all exchanges together is inappropriate.

Summary of our proposals on property costs

5.85 The costs of any vacant space within any building should be attributed in the same way that non-vacant space is attributed within that building.

5.86 BT should not attribute all vacant space within operational buildings with an MDF in accordance with the Anchor Tenant principle, i.e. it should not be attributed solely to Openreach, cable chambers nor to MDF areas.

5.87 BT should not apply any mark-up for potential future growth to LLU hostel areas.

5.88 The costs for each type of space should be identified and attributed separately.

[327] See for example the arguments on the removal of the line length adjustment in paragraphs 3.101 to 3.105 in the Volume 2: LLU and WLR Charge Controls2014 FAMR, http://stakeholders.ofcom.org.uk/binaries/telecoms/ga/fixed-access-market-reviews-2014/draftstatement/volume2.pdf

Implementation of our proposals

5.89 Our proposals for the attribution of non-chargeable vacant space require BT to attribute property costs separately for different types of space. We will work with BT to determine how best to implement these proposals.

Impact of our proposals

5.90 BT Group Property was unable to provide the necessary data to calculate the impact of our proposal in the time available. This has meant that we have not been able to undertake detailed assessments of the impacts of our proposals. For the purposes of this consultation we have provided indicative, high-level estimates of the impacts of the two main changes to the attribution of property costs that we have proposed:

- The removal of the Anchor Tenant principle.
- The attribution of non-chargeable vacant space.

5.91 For the removal of the Anchor Tenant principle we have used BT's estimates of the impact of introducing this change in the 2012/13 Regulatory Financial Statements.[328] Although these relate to 2012/13 costs, we believe these provide a reasonable indication of the scale and direction of movement of the impacts on each market in 2013/14.

5.92 BT has provided information to help assess the impact of our proposal for the attribution of non-chargeable vacant space.[329] This information related to how office space costs are currently attributed within AG106 (Group Property and Facilities Management) by market and how all property costs are attributed across AG106 (Group Property and Facilities Management), again by market. We have multiplied an estimate of non-chargeable office space by the difference between these two attributions to determine the impact on AG106 (Group Property and Facilities Management) attributions in each market.

5.93 The results are shown in Table 5.1 below. This shows that our proposals might reduce operating costs in 2013/14 by £21.9m in regulated markets (£1.5m in Business Connectivity markets) as defined within BT's 2013/14 Regulatory Financial Statements.

[328] These are given under change number 12 on page 18 with what we have referred to elsewhere as the October 2013 report. Report requested by Ofcom describing certain changes to the Accounting Documents for the year ended 31 March 2013 and illustrating the resulting differences to the Current Cost Financial Statements had those changes not applied, BT, 3 October 2013 https://www.btplc.com/Thegroup/RegulatoryandPublicaffairs/Financialstatements/2013/ReportrequestedbyOfcomfortheyearended31March2013.pdf

[329] BT responses dated 17 September 2015 and 5 November 2014.

Table 5.1 Estimated Impacts of Revised Property Cost Attributions on 2013/14 costs (£'m)

	Fixed Access	Business Connectivity	Narrowband	Wholesale Broadband Access	Network Residual	Retail Residual
Non chargeable vacant space	(5.1)	(1.5)	(3.1)	(2.2)	(2.1)	14.0
Vacant Space in exchanges	(25.0)	0.0	11.0	5.0	5.0	5.0
Total	(30.1)	(1.5)	7.9	2.8	2.9	19.0

5.94 We will work with BT so that more accurate estimates of the impact of any final decisions we make are available for our final statement.

Electricity for TSO and Openreach

Introduction

5.95 Our review and the work performed by Cartesian were based on BT's Regulatory Financial Statements for 2013/14 and therefore reflect the attribution rules used in the preparation of those Regulatory Financial Statements.

5.96 However, in recent years BT has made changes to the way that it attributes electricity costs and proposed further changes which have not been implemented and are therefore not reflected in the Regulatory Financial Statements and were not captured by the Cartesian review. These include the correction of errors and a proposal by BT to change some of its power attribution methodologies.

5.97 In its March 2015 Change Control notification, BT proposed changes to the way it allocated TSO electricity. We discussed this proposal with BT and highlighted our concern that this change might not be objective as the changes proposed affected just PSTN equipment in Fixed Access markets and no other types of equipment used in other markets, notably WBA and Business Connectivity. Subsequently BT told us that it had undertaken more work to review energy utilisations for two asset groups (21CN equipment and DSLAMs). These produced further changes to attributions that this time affected all markets.

5.98 Given the timing of BT's recent proposals to make further changes to its existing attribution methodologies, it was not possible in the time available to review properly and understand consequences of the possible changes or what they might mean for the existing attribution rules.

5.99 BT has not reflected the proposed changes in the 2014/15 Regulatory Financial Statements.

5.100 In addition BT has proposed to correct an error in its 2015/16 Regulatory Financial Statements. This relates to the way it implemented the treatment of LLU electricity costs.

5.101 In the remainder of this section we consider the changes that BT has made and has proposed in recent years. We set out what we said in June and the responses that we received to the June consultation before considering the appropriateness of BT's current methodologies.

Background

5.102 At the beginning of this section we provided an overview of how electricity and property costs are attributed. We explained that the attribution of electricity costs is based on transfer charges raised by BT Group Property. These in turn are based on detailed information on occupancy, on a building by building basis.

5.103 All electricity costs are included in AG106 (Group Property and Facilities Management). While electricity costs for office space are attributed together with other office costs in the transfer charges the attribution of electricity costs for specialised space is carried out independently of the property costs for specialised space.

5.104 We understand that the basis for electricity transfer charges (and BT's total electricity costs by building) is an inventory of historic metered power consumption in each building dating from 2007.[330] BT has told us that there are no plans to update this data.

5.105 Electricity costs in operational space are generally either attributed to TSO or Openreach. TSO space is mainly categorised as apparatus. Openreach includes space for cable chambers and the MDF and areas for LLU equipment. However, electricity usage for LLU equipment is recorded within TSO.[331]

5.106 The electricity costs incurred by TSO equipment are attributed to plant groups using a bottom up model. This estimates power consumption for different types of equipment using maximum consumption ratings or sample readings. These estimates are then used to attribute electricity costs to these equipment types and on to plant groups.

What we said in June

5.107 In June we considered the approaches used to attribute the two main methodologies under which electricity costs are attributed from AG106 (Group Property and Facilities Management) on to plant groups: power consumption for TSO and power consumption for Openreach. We noted that electricity costs are an increasingly important part of BT's costs.

5.108 We said that we would work with BT to better understand how it attributes electricity costs and that we would consider in the light of our review whether the current methods are appropriate, and what if any changes need to be made.

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[330] We understand this provides the basis for attributing energy costs to each LOB but that the total of all energy trades is updated every year to reflect actual energy costs.
[331] BT response dated 28 August and 4 September 2015

Electricity for TSO

5.109 We raised two concerns in June. Firstly we found some hard coded inputs in the TSO electricity model. After further discussions with BT we found this concern was unfounded.[332]

5.110 Secondly, there were some concerns with the actual power ratings used in the model. We identified some inconsistency between which measure of power consumption was used.

5.111 In June we said that BT had told us that they were in the process of updating the TSO electricity model. BT had included the change to the PSTN power ratings in its March 2015 Change Control notification.[333] We said that we were concerned that this change might not be objective as the changes proposed affected just PSTN equipment and not other types of equipment.

5.112 We also said that BT had told us that it had undertaken further work to review energy utilisations for two asset groups (21CN equipment and DSLAMs). These produced further changes to attributions that affected all markets.

5.113 Given the timing of BT's proposals, we said that we were unable to take a view about their appropriateness for electricity for TSO.

Electricity for Openreach

5.114 We said that Cartesian had identified an issue about consistency with the treatment of Openreach and TSO electricity costs. However, we found there were good reasons for a different treatment to be adopted for Openreach electricity costs and so we did not make any proposals.[334]

5.115 Our view remains unchanged and we do not consider electricity for Openreach further.

Stakeholder Responses

5.116 BT considered its current methods of attributing electricity costs to be appropriate and consistent with the Regulatory Accounting Principles.[335] It said that it would work with Ofcom to corroborate the electricity consumption increase on 21CN.[336]

5.117 TalkTalk requested greater transparency about how the initial split of electricity costs between TSO and Openreach was carried out.[337] We have provided further background in this section in order to address this issue.

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[332] June Consultation, page 93, paragraph 9.121
[333] BT, Change Control Notification 2015, section 3.20
[334] June Consultation, page 93, paragraph 9.124
[335] BT, June Consultation response, page 36, paragraph 128
[336] BT, June Consultation response, page 38, paragraph 140
[337] TalkTalk, June Consultation response, page 20, paragraph 3.88

Our assessment

5.118 As explained above, in recent years BT has proposed and made changes to the way that it attributes electricity costs. These changes include:

- Errors corrected in the 2014/15 Regulatory Financial Statements;
- Changes to electricity attribution methodologies proposed by BT in 2014/15; and
- Proposed error correction for the 2015/16 Regulatory Financial Statements.

5.119 As explained below, we consider that:

- BT's corrections in its 2014/15 Regulatory Financial Statements appear reasonable.
- BT's current electricity attribution methodologies are inappropriate and we propose to require BT to implement the changes proposed by BT in 2014/15 in the 2015/16 Regulatory Financial Statements.
- BT's proposed correction for the 2015/16 Regulatory Financial Statements appears to be appropriate.

5.120 We also consider three further issues we have identified during our review, relating to NGA equipment, base data on electricity consumption by building and measures of power consumption.

<u>Errors Corrected in the 2014/15 Regulatory Financial Statements</u>

5.121 BT corrected two sets of errors in its 2014/15 Regulatory Financial Statements: the first relating to PSTN equipment volumes, the second to LLU equipment.

PSTN Equipment errors

5.122 BT identified the following errors in the 2013/14 TSO electricity model used to attribute electricity costs to PSTN digital switching equipment, both System X and AXE10 systems. Each of these errors was corrected in the 2014/15 Regulatory Financial Statements:

- Power consumption for AXE10 equipment had been estimated using fitted lines instead of working lines. As a result AXE10 power consumption was overstated.
- A formula error led to power consumption for System X equipment being attributed using data for 2012/13, rather than 2013/14.
- A failure to update allocation bases for various types of exchange equipment meant that the 2013/14 Regulatory Financial Statements were based on the 2012/13 attribution bases.

5.123 We agree with the corrections that BT has made and propose no further action.

5.124 BT should ensure that Ofcom and other stakeholders are fully informed of the changes being made and the impacts. We expect to see these errors and their impact described in the 2015 reconciliation report.[338]

LLU energy costs ring-fencing methodological error

5.125 In the 2013/14 Regulatory Financial Statements, BT identified the energy consumed by and recharged to LLU operators. However, as BT attributes electricity costs within AG106 on the basis of the transfer charges, applying a percentage to the transfer charges will not necessarily result in the actual incurred LLU energy costs being attributed to LLU services.

5.126 BT corrected this error in the 2014/15 Regulatory Financial Statements. LLU costs are ring-fenced and attributed to LLU specific plant groups and remaining costs are apportioned between all the other equipment types based on relative consumption. BT noted this change in its March 2015 Change Control notification under changes to the reporting of the Wholesale Line Access market.[339]

5.127 We agree with the correction that BT has made and propose no further action.

BT's proposed 2014/15 changes to electricity attribution methodologies

5.128 BT made proposals for the attribution of electricity costs to PSTN equipment in its. March 2015 Change Control Notification. It subsequently made further proposals for the attribution of electricity costs to Transmission, 21CN, DSLAM and IP equipment. We discuss each of these in turn.

PSTN equipment methodology changes

5.129 BT identified outdated data hardcoded into electricity models and proposed the use of more granular volume data that better reflected different PSTN switching equipment's relative power use. For example, this would allow the model to reflect that working and non-working lines consume different levels of electricity.

5.130 BT also proposed to update the attribution of electricity costs to processors and main exchange equipment to reflect the most up to date data from TSO. BT said that this would result in the attribution of electricity costs for AXE10 switching equipment being more accurate as it would no longer be based on System X switching equipment's power levels. Instead it would use actual relevant equipment volumes and separate power assumptions for each type of equipment.[340]

5.131 These proposals would reduce the relative estimates of electricity consumed by PSTN equipment and their share of total electricity costs. Electricity costs would decrease in Fixed Access and Narrowband markets and increase in Business Connectivity and WBA markets.

5.132 These proposals were not implemented in the 2014/15 Regulatory Financial Statements.

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[338] BT is required to prepare and publish a reconciliation report setting out the impact of methodology changes and material errors on the Regulatory Financial Statements. The reconciliation report for 2014/15 has not yet been published by BT

[339] See Section 3.2 of BT's March 2015 Change Control Notification report

[340] BT ASIG paper RA15-024 provided to Ofcom 25 August 2015

5.133 We consider that the current methodology for attributing electricity costs to PSTN equipment does not take into account the most accurate and up to date information and is therefore not objective. We therefore consider that the current methodology is inappropriate.

5.134 BT's proposed methodology appears to take this information into account. Therefore we propose that BT should be required to implement its 2015 proposal for the attribution of costs to PSTN equipment.

Transmission equipment methodology changes

5.135 The assumptions for transmission equipment power consumption were last updated in 2004/05. Volumes were taken from the Core Transmission Costing System (CTCS) and then factored-up on the assumption that CTCS did not contain all the volumes of equipment.

5.136 Since 2012/13 the volumes used in the electricity model have been sourced from Network Control Layer Planning Assignment and Configuration System (PACS), or Integrated Network System (INS). These sources include all relevant equipment volumes, so these no longer need to be augmented.

5.137 BT proposed to estimate power consumption by each type of equipment by multiplying equipment volumes from PACS or INS by the manufacturers' theoretical power consumption. The exception would be Core Radio electricity for which maximum power consumption rating data was available.[341]

5.138 This proposal would reduce estimated consumption for these types of transmission equipment and hence their share of total electricity costs. This would reduce costs in Business Connectivity and WBA markets and increase electricity costs in Fixed Access and Narrowband markets.

5.139 This proposal was not implemented in the 2014/15 Regulatory Financial Statements.

5.140 We consider that the current methodology for attributing electricity costs to transmission equipment is not appropriate because it takes account of redundant information. We consider that BT's proposal to remove volume adjustments is an improvement on those methods in place in the 2013/14 Regulatory Financial Statements and propose BT should be required to attribute these costs on this basis.

21CN equipment methodology changes

5.141 The current attribution model uses maximum card rack capacity to calculate the electricity consumption for 21CN equipment. However, not all racks are full so the current method will overstate power consumption for this equipment. Internal models used by BT's TSO energy team use actual card volumes instead of racks.

5.142 BT proposed to align the regulatory accounting treatment with the attribution used by the TSO energy team and thus use the card volumes rather than rack capacity as a basis for estimating energy consumption for 21CN equipment.[342]

[341] BT, ASIG paper RA15-072 provided to Ofcom 25 August 2015
[342] BT, ASIG paper RA15-072 provided to Ofcom 25 August 2015

5.143 This proposal would decrease estimated electricity consumption by 21CN equipment and hence its share of total electricity costs. This would reduce electricity costs for AISBO, MISBO and WBA services and 21CN based services in Network residual and increase cost for TISBO services and those in the Fixed Access and Narrowband markets.

5.144 This proposal was not implemented in the 2014/15 Regulatory Financial Statements.

5.145 We consider that the current methodology for attributing electricity costs to 21CN equipment is inappropriate as it is not objective. It does not take account of available information about rack usage.

5.146 We propose that BT should be required to implement its 2015 proposal for the attribution of costs to 21CN equipment. We consider that BT's proposal addresses our objectivity concern by using card volumes rather than rack volumes.

DSLAM equipment methodology changes

5.147 The current attribution model uses the maximum rack count volumes of used and unused racks to attribute electricity costs to DSLAM equipment. The maximum rack count is the total number of racks that could be installed in locations. This overstates the number of racks actually installed and consuming power.

5.148 Furthermore, the current power rating assumption is by mux type for used racks. However not all racks are used. These two effects lead to the current models overstating electricity consumption of DSLAMs.[343]

5.149 To address these issues BT proposed to estimate power consumption for DSLAMs by:

- Using the volume of actual racks;
- Using different power ratings for each category of mux type;
- Assuming unused racks had a lower power rating of 1/3 max power load.[344]

5.150 This proposal would reduce estimated consumption for DSLAMs and hence their share of total electricity costs. This would reduce electricity costs for WBA services and increase costs in all other markets.

5.151 This proposal was not implemented in the 2014/15 Regulatory Financial Statements.

5.152 We consider that the current methodology for attributing electricity costs to DSLAM equipment is not objective as it does not take account of the available data on rack use and multiplexor (mux) type.

5.153 We consider BTs proposal to reflect different power ratings for different pieces of equipment and use actual rack volumes is objective as it takes account of all

[343] BT, ASIG paper RA15-072 provided to Ofcom 25 August 2015
[344] This assumption was based on a study by ETSI, the European Telecommunications Standards Institute

available data. We propose that BT should be required to implement its 2015 proposal for the attribution of costs to DSLAMs.

IP equipment methodology changes

5.154 The current attribution model estimates electricity costs for three types of IP cabinets. However, this data has not been updated since 2012/13 and is no longer available in the format required by the current model.

5.155 BT proposed to use the same volumes as those used by the TSO Network electricity planning team in their cost model in order to use more relevant and up to date data.[345]

5.156 This proposal would reduce estimated consumption for IP equipment and hence its share of total electricity costs. This would reduce electricity costs for AISBO and MISBO services and increased costs increase in all other markets.

5.157 This proposal was not implemented in the 2014/15 Regulatory Financial Statements.

5.158 We consider that the current methodology for attributing electricity costs to IP equipment is inappropriate as it is not objective. It does not take account of the available up to date data held by BT TSO.

5.159 We consider that BT's proposal to use up to date data held by BT TSO is objective as it takes account of all available data. We propose that BT should be required to implement its 2015 proposal for the attribution of costs to IP equipment.

BT's proposed error correction for the 2016 Regulatory Financial Statements

5.160 During Ofcom's review of BT's proposed changes to the 2014/15 Regulatory Financial Statements BT identified an error in the implementation of ring-fencing LLU energy costs.

5.161 Activity groups AG161, AG162, AG163 and AG164 relate to specialised accommodation equipment and back-up power equipment. Specialised accommodation equipment includes heating, ventilation and air-conditioning units whereas back-up power includes back-up generators.

5.162 The costs within these activity groups are attributed using modified versions of the TSO power costs model (the DTNELSP and DTNELST bases). The changes reflect that no costs are attributed to NGA products. NGA street cabinets are not located in exchange buildings and do not consume exchange power.[346]

5.163 However, BT has erroneously not taken account of the impacts of the LLU ring-fencing when attributing the costs of these four activity groups in 2014/15 Regulatory Financial Statements. This lead to LLU products being attributed some of the specialised accommodation equipment and back-up power equipment costs but not as much as they should have been. Instead too much cost was attributed to other products.

[345] BT, ASIG paper RA15-072 provided to Ofcom 25 August 2015
[346] BT ASIG paper RA14-054 provided to Ofcom 25 August 2015 and BT response 20 October 2015

5.164 BT has proposed to correct this error in the 2015/16 Regulatory Financial Statements. We have included an estimate of the impact of this change for the leased line change control. This is row relating to "Effect of LLU ring-fencing (AGs)" within Table 5.3 below.

5.165 We agree that this attribution should be corrected as it ensures the attribution of these costs is consistent with the main DTNELSP/T base method.

Further issues identified by Ofcom

5.166 We have identified three further issues during our review, relating to NGA equipment, base data on electricity consumption by building and measures of power consumption. We consider these in turn, below.

NGA Equipment

5.167 NGA street cabinets are not supplied by power from BT's exchange buildings. They have their own power supply and are individually metered. These metered amounts feed into the current electricity attribution model, which then calculates the percentage that this consumption makes of total electricity costs. It is this percentage that is used within the attribution model to attribute electricity costs to NGA network components.[347]

5.168 We consider that this methodology contains an error which is similar to that which BT identified when it sought to ring-fence LLU equipment costs. BT attributes electricity costs within AG106 (Group Property and Facilities Management) on the basis of the transfer charges, applying a percentage to the transfer charges will not result in the actual incurred cost.

5.169 BT has confirmed it has the information about how much power has been consumed by NGA street cabinets and therefore the costs.[348] We are not aware of any reasons why these costs cannot be directly attributed to NGA in the same way that electricity costs for LLU equipment are separately ring-fenced.

5.170 We consider that the current methodology for attributing electricity costs to NGA equipment is not objective because it does not take account of available data.

5.171 Having reached the provisional view that the current methodology for attributing electricity costs to NGA equipment is not objective and that the information that BT proposed to use is practicable, we consider that the current methodology is inappropriate.

5.172 We propose that the costs of power consumed by NGA street cabinets must be directly attributed to NGA in the same way that electricity costs for LLU equipment are separately ring-fenced.

5.173 We consider our proposal to directly attribute NGA power addresses our objectivity concern as it takes account of all available data. It is also consistent with our proposed treatment of LLU equipment costs.

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[347] BT response dated 28 August and 4 September 2015
[348] BT response dated 28 August 2015

5.174 To further aid consistency of approach we also propose that where BT meters and tracks actual electricity usage for any specific types of equipment BT must ring-fence or directly allocate these costs to services using that equipment and then apportion the remaining costs across all the other equipment types.

Base data on Electricity Consumption by building

5.175 We noted above that the electricity attribution base is built on BT Property's transfer charges and that this in turn is based on building electricity consumption information dating from 2007.[349]

5.176 It seems likely that each building's relative electricity consumption now will be different to what it was in 2007. Consumption will have been affected by many factors. Equipment types and numbers employed will have changed in response to network initiatives, such as rollout of the 21CN and NGA platforms, and unbundling. There may well have been significant changes in office occupancy.

5.177 We therefore consider that the use of 2007 data on which to base electricity attributions is not objective as it does not take account of available and up to date financial and operational data that is relevant.

5.178 We understand that BT TSO holds up to date data on electricity consumption by building and there is no reason why this information could not be used as a basis for the attribution of electricity costs.[350]

5.179 Having reached the provisional view that the current electricity attribution base is neither objective and that the information that BT proposed to use is practicable we consider that the current electricity base is inappropriate.

5.180 We therefore propose that BT must update the base data annually on which it calculates electricity attributions to reflect the most recent annual consumption in each building. We consider this proposal will address the objectivity concern we note above.

Measures of electricity consumption

5.181 In June, we identified inconsistencies between measures of electricity consumption used for different equipment. We have now undertaken further analysis on this issue.

5.182 We have already proposed that where BT can identify actual usage they should ring-fence the costs and ensure the actual costs are attributed to the relevant services. This applies to electricity costs for LLU and NGA equipment. For these types of equipment theoretical measures of power usage are not required.

5.183 For other equipment BT generally uses the theoretic maximum power consumption as the relative measure of usage. The exception is equipment on CISL and IN

[349] BT response dated 28 August and 4 September 2015
[350] BT response dated 28 August and 4 September 2015

platform equipment[351] which use measured consumption. However, these equipment types account for less than 0.1% of all power consumed.[352]

5.184 We consider that the current approach shows reasonable consistency across all equipment types. The possible exception of PSTN/Switch equipment for which BT is proposing to estimate power consumption from average sample meter readings.[353] The current approach for this equipment is to use theoretic ratings. It would appear then that retaining the current measures would seem more consistent. We will engage with BT to understand the current approach better and to confirm the appropriateness of the current measures.

Summary of our proposals on the attribution of electricity costs

5.185 We have noted above that we have found certain aspects of BT's attribution of electricity costs to be inappropriate. Our proposals are for BT to change these attributions to correct the errors that remain outstanding and to make further changes to the attribution to address the objectivity and causality concerns we have identified.

5.186 In summary our proposals are that:

- The methodology error relating to how the ring-fencing of LLU equipment costs affects costs in specialised accommodation equipment Activity Groups should be corrected (Effect of LLU ring-fencing).
- BT should implement the changes it proposed for the 2015 RFS in relation to the attribution of electricity costs to PSTN, Transmission, 21CN, DSLAM and IP equipment. (Effect of PSTN, Transmission, 21CN, DSLAM, IP and PSTN errors)
- Electricity costs associated with NGA equipment should be ring-fenced in the same way as LLU equipment electricity costs are, and appropriate changes then made to Activity Groups AG161, AG162, AG163 and AG164. (Effect of NGA ring-fencing)
- Where the actual electricity usage can be separately metered and/or measured the associated electricity costs should be directly allocated to services using that equipment using the same ring-fencing methods as for LLU and NGA equipment. (The effects of this change are not included in Table 5.3 below)
- The base data used to attribute electricity costs by building should be updated annually to reflect the most recent annual consumption in each building (The effects of this changes are not included in Table 5.3 below)

Impact of correcting errors

5.187 As outlined above, BT corrected some errors between the 2013/14 and 2014/15 Regulatory Financial Statements. Table 5.2 shows BT estimates of the impact of correcting these errors on the 2013/14 Regulatory Financial Statements.

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351 CISL is BT's Common Intelligence Service Layer and IN is BT's Intelligent Network
352 BT, TSO model – 024 TSO Electricity Best Practice Model P12 FY1314 FINAL, 24 September 2015
353 BT, ASIG paper RA15-024 provided to Ofcom 25 August 2015

5.188 This show that these corrections would reduce operating costs by £5.9m in regulated markets as defined within BT's 2014/15 Regulatory Financial Statements, but costs would increase by £2.7m in Business Connectivity markets.

Table 5.2: Impacts of correcting errors in the attribution of Electricity operating costs by market

Electricity attribution	Fixed access	Business connectivity	Narrow-band	WBA 1 and 2	Wholesale residual	Retail Residual
Effect of LLU ring-fencing	1.8	(0.3)	(0.3)	(0.4)	(0.8)	(0.0)
Effect of PSTN errors	(8.7)	3.0	(4.1)	3.2	6.2	0.4
Total	**(6.9)**	**2.7**	**(4.5)**	**2.8**	**5.5**	**0.4**

Impact of proposals

5.189 Table 5.3 shows BT's estimates of the impact of our proposals on electricity on operating costs in 2013/14 in each market. These do not however include the impact of our last two proposals within paragraph 5.186 above. BT has not been able to carry out a review of what changes that might arise from revisions to the base electricity consumption data by building in time for this consultation.

Table 5.3: Impacts of proposals on the attribution of Electricity operating costs, by market.

	Fixed access	Business connectivity	Narrow-band	WBA 1 and 2	Wholesale residual	Retail Residual
Effect of LLU ring-fencing (AGs)	2.1	-0.3	-0.4	-0.4	-0.8	-0.0
Effect of DSLAM	6.3	5.2	6.3	-17.4	-1.0	0.5
Effect of 21CN	5.3	2.9	5.7	-2.1	-12.4	0.5
Effect of Transmission	8.4	-14.9	8.3	-2.4	0.0	0.6
Effect of IP	0.6	0.1	0.6	0.3	-1.6	0.0
Effect of PSTN	-8.2	4.4	-9.3	4.7	7.8	0.6
Effect of NGA ring-fencing	-0.2	-0.2	-0.2	-0.2	0.8	-0.0
Total	**14.2**	**-2.9**	**11.0**	**-17.4**	**-7.1**	**2.2**

Source: BT estimates provided 10 October 2015

5.190 Table 5.3 shows that for a particular market some proposals increase costs whilst others decrease them. This is the consequence of a proposal either increasing or decreasing the estimated consumption for a particular piece of equipment and thus affecting its estimated share of electricity consumption, which remains constant.

5.191 Table 5.4 shows BT's estimates of the combined impact of correcting errors and of our proposals on electricity costs in 2013/14. This shows that our proposals might reduce operating costs by £0.9m in regulated markets as defined within BT's 2013/14 Regulatory Financial Statements. Of this £0.2m is a reduction to Business Connectivity markets. These again do not however include the impact of our last two proposals within paragraph 5.186 above.

Table 5.4: Total Impacts of all corrections and proposals by market for 2013/14

Electricity attribution	Fixed access	Business connectivity	Narrow-band	WBA 1 and 2	Wholesale residual	Retail Residual
Operational Costs	7.3	(0.2)	6.5	(14.6)	(1.7)	2.6
Mean Capital Employed	13.7	0.1	13.7	(28.4)	(4.3)	5.2

Consultation questions

Question 5.1: Do you agree with our assessment that property costs should be separately attributed from electricity costs?

Question 5.2: Do you agree with our assessments that the attribution of vacant space under the Anchor Tenant methodology and the mark-up of LLU hostel area space are inappropriate? Please provide your reasons.

Question 5.3: Do you agree with our assessments of the attributions of electricity costs including our assessments of BT's proposed error corrections and its proposed attributions? Please provide your reasons.

Question 5.4: Do you agree that our proposals for the attribution of property and electricity costs?

Section 6

Sales of surplus copper and property

Introduction

6.1 In this section we discuss the attribution of the sale of surplus assets that currently generate two revenue streams for BT:

- profits or losses from sales of buildings that are no longer required (sales of property) and
- profits from disposal of surplus or redundant copper that has been recovered from BT's network (sales of copper)

6.2 We explain that the current methods that BT uses to attribute sales of property and sales of copper are inappropriate.

6.3 BT currently attributes sales of property to the Retail Residual business. In the June Consultation we provisionally found this attribution inappropriate and proposed that BT should attribute these proceeds in the same way that the underlying costs for similar properties are allocated. We make no change to that proposal in this consultation.

6.4 BT currently attributes sales of copper depending on from where in the network the copper has been removed. For example sales of copper removed from the access network are attributed to access plant groups; sales of copper removed from BT's core and backhaul networks are attributed to the Wholesale Residual business.

6.5 In June we did not find these attributions inappropriate. In this section we now explain that we find the attribution of sales of copper removed from BT's core and backhaul networks to be inappropriate because it is inconsistent with the treatment of sales of property buildings and the treatment of other spare and redundant assets. We propose that BT must attribute any sales of copper extracted from its core and backhaul network in the same way as it attributes the costs of fibre cables in its core and backhaul network.

6.6 We have not been able to estimate the impact of this proposed change to the attribution methodology but given that sales of copper from BT's core and backhaul networks are much lower in 2014/15 than in previous years, and expected to decline significantly in the future, this proposal would not have a significant impact on the costs of regulated markets. We are not taking this proposal into account within the leased line charge control.

Background

6.7 Sales of property and sales of copper are separately identified and included as negative operating costs within BT's Regulatory Financial Statements.

Sales of Property

6.8 Sales of property are recorded within BT's regulatory accounting system as, "Profit/(Loss) on Disposal of Land and Buildings". BT attributes all such profits to the Retail Residual Market[354]. Sales of property were less than [✂£2m to £5m] in 2013/14[355] but significantly higher in 2014/15, due to the sale of Keybridge House.[356]

Sales of Copper

6.9 The "Sale of Scrap" base methodology apportions other operating income received by Openreach from the sale of scrap copper.[357] The description in BT's 2014/15 Accounting Methodology Document states:

> "Actual cable recovery data provided by Openreach is used to allocate income allocated to PG986R (Openreach Other Activities). The remainder is allocated between PG118C (D-side Copper Capital) and PG980R (Repayment works) based on the amount of capital expenditure on D-side copper cable that is proper to Repayment Works." [358] [359]

6.10 Total income from sales of copper was more than [✂£100m to £150m] in 2013/14. The majority [✂ £100m to £150m][360] was copper extracted from BT's core and backhaul networks. That however reduced significantly in 2014/15. In its 2015 Annual Results BT said that "Sales of redundant copper generated net income of £29m and we expect no benefit from this in 2015/16."[361]

6.11 The costs of the Openreach Copper Recovery Team are attributed to plant group PG986R (Openreach Other Activities).[362] The costs of this plant group are attributed to component CK986 (Openreach Other Activities).[363] The costs of this component are attributed to the network Residual business.

6.12 We noted that the treatment of the scrap value of copper was the subject of some discussion within the 2014 FAMR.[364]

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[354] BT, Accounting Methodology Document 2015, page 59

[355] BT response dated 27 March 2015 to question A1(e) of the section 135 notice dated 13 March 2015

[356] BT, June Consultation response, page 33, paragraph 119

[357] BT, Accounting Methodology Document 2015, page 82

[358] BT, Accounting Methodology Document 2015, page 82

[359] For the June Consultation we asked BT to clarify the meaning of "proper to Repayment Works". BT explained that this means PG8980R receives a proportion of the total 'Access Copper other operating income' based on the share of capital expenditure for "Openreach repayments capital" to total capital expenditure booked to the class of work LDC". BT answer to question C2(b), 2nd CAR s135, 13 February 2015.

[360] BT response dated 6 March 2015 to question C2(e) of the section 135 notice dated 13 February 2015

[361] https://www.btplc.com/News/ResultsPDF/q415-release.pdf

[362] BT, Accounting Methodology Document 2015, page 44

[363] BT, Accounting Methodology Document 2015, page 223

[364] This was discussed in two places. Firstly in paragraphs 3.59 to 3.65 in Volume 2. See http://stakeholders.ofcom.org.uk/binaries/telecoms/ga/fixed-access-market-reviews-2014/statement-june-2014/volume2.pdf. Secondly in paragraphs A13.279 to A13.285 in Annex

What we said in June

Sales of Property

6.13 In the June Consultation we considered that BT's current treatment of sales of property was inappropriate.

6.14 We found that the costs of vacant space within BT buildings that are still being occupied are recovered from the existing occupants under Group Property and Facilities Management (AG106). However, sales of property are allocated only to the Retail Residual business. We said that this method does not seem objective and that it appears to benefit BT unfairly.

6.15 We explained that properties that have been sold may have been used to provide regulated network services in the past. Operators that have consumed these services, through charges they have paid, have contributed to the costs of these buildings. We said that it did not seem right that BT should retain all the proceeds by allocating all the proceeds to its Retail Residual business. There may also have been "windfall gains" but that is an issue of cost recovery that may be investigated within any future charge controls. It is important that BT's regulatory accounting system includes information that allows the sales of property and the attribution of these sales to be monitored and reviewed.

6.16 We also said that attribution of sales of property appears inconsistent with the treatment of proceeds from other surplus assets, such as the sales of copper recovered from the access network.

6.17 We proposed sales of property should instead be attributed in the same way that the underlying costs of similar types of buildings are attributed. We proposed that underlying costs would be rent for buildings owned by TelerealTrillium and depreciation for BT owned buildings.

6.18 Finally we said we would continue to investigate the treatment of the sale of Keybridge House.

Sales of Copper

6.19 In the June Consultation we did not consider that the way BT attributes its income from sales of copper was inappropriate.

6.20 We found that while sales of access copper are attributed to access components, most copper recovered is from within BT's core and backhaul networks. We said that it would seem counter to cost causality principles to allocate these proceeds to copper access network plant groups and components. We also said that while it might be appropriate to allocate these sales to regulated services that still used copper in BT's core and backhaul networks, we are not aware of any that do so to any material extent. Therefore, allocating these proceeds to the Wholesale Residual business did not seem unreasonable.

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13. See http://stakeholders.ofcom.org.uk/binaries/telecoms/ga/fixed-access-market-reviews-2014/statement-june-2014/annexes.pdf

Stakeholder comments

Sales of Property

6.21 Vodafone and TalkTalk agreed with our proposals for sales of property.

6.22 BT did not agree that the way that it currently attributes "profits and losses on disposal of land and building is 'clearly inappropriate'."[365] It argued that "such projects (profit on sale of land and buildings) are ... not part of the normal costs of managing our property estate and therefore it would not be cost causal to allocate them to Group Property and Facilities Management AG106."[366] It then went on to say "The exclusion of such costs is consistent with the treatment that Ofcom has required us to adopt for pension deficit costs and deafness claims."[367]

6.23 To support these points BT quoted extracts from the report it had commissioned from FTI. FTI said the following:

- "We consider that Ofcom's previous approaches to cost recovery in relation to past activities are relevant in this case. In particular, the arguments that Ofcom has previously made in charge controls in disallowing costs relating to pension deficit payments and deafness claims suggests that the profits on disposal of property assets should also be excluded from the calculation of costs for the purpose of setting prices."[368]

- "to the extent that a profit arises on sales of a lease or freehold, that can be regarded as an 'unanticipated changes in asset prices' and should therefore not be included in future charge controls."[369]

6.24 BT also provided further details on its sale of Keybridge House in 2014/15.[370]

Sales of Copper

6.25 Vodafone disagreed with our proposal for the treatment of sales of core and backhaul copper and said our proposed treatments of sales of property and copper were inconsistent.[371]

6.26 Vodafone explained that "in many cases, the copper cables disposed of were used in the past to provide regulated Backhaul and Inner Core services, and regulated services will therefore have contributed to the cost of these cables."[372]

6.27 Vodafone explained that as for the sales of property, "precisely the same statement could be made with regard to unregulated services, which also do not still use copper

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[365] BT, June Consultation response, page 33, paragraph 118
[366] BT, June Consultation response, page 33, paragraph 122
[367] BT, June Consultation response, page 33, paragraph 122
[368] BT, June Consultation response, page 34, paragraph 123
[369] BT, June Consultation response, page 34, paragraph 123
[370] BT, June Consultation response, page 33, paragraphs 119 - 121
[371] Vodafone, June Consultation response, page 25, answer to question 9.3
[372] Vodafone, June Consultation response, page 11, paragraph 3.12

to any material extent. Applying the same logic would lead to the conclusion that proceeds should not be allocated to unregulated services."[373]

6.28 Vodafone argued that "revenue from disposals of Inner Core and Backhaul copper should recognise the relevance of regulated services, and the common nature of that copper. For example, revenue could be allocated in line with the costs of existing Backhaul and Inner Core cables."[374]

6.29 Vodafone also disagreed with Ofcom's view that recovery of copper in the access network is unlikely to be a material issue in the short to medium term. Vodafone argued that revenue from sales of Access copper is of material relevance to current charge controls. It felt that the depreciation of copper assets in the Access network should "be calculated by writing off the difference between the original cost of the copper cable and its expected future disposal or "residual" value."[375] It believed that such an approach would be "in accordance with BT's own accounting policies and best practice."[376]

6.30 BT agreed with Ofcom's June view that the current methodology for the treatment of revenue from sales of copper was not inappropriate.

Ofcom's response and assessment

Sales of Property

6.31 BT argues that our proposed approach is inconsistent with the treatment of pension deficit payments and deafness claims in charge controls. In our review of BT's cost attribution methodologies we are concerned with the attribution of costs, not their recovery. Our treatments of pension deficit payments and deafness claims were taken as decisions about cost recovery for future charge controls. As we have not taken any decisions on cost recovery of sales of property as part of any charge control decisions we do not therefore agree with BT that we have been inconsistent. Nevertheless, it is important, as we said in June, that BT's regulatory accounting system includes information that allows the sales of property and the attribution of these sales to be monitored and reviewed in the context of future charge controls.

6.32 BT's response provided further details on the sale of Keybridge House, the profits from which were included within BT's 2014/15 accounts. This provides evidence that this property was used to provide services that are now within BT's residual businesses and we therefore provisionally agree that, in this instance, the treatment of these one-off proceeds for Keybridge House is appropriate. We would however expect BT to apply a similar approach to future sales. For example, if a building is sold that has only been used to provide regulated services we would expect the sales proceeds only to be attributed to regulated services.

6.33 The above discussion does not cause us to change our June proposals. We still consider that the current approach, which attributes all sales of property to BT's

[373] Vodafone, June Consultation response, page 11, paragraph 3.14
[374] Vodafone's arguments on sales of copper are in paragraphs 3.12 to 3.16 of its response. The final quote is from paragraph 3.16.
[375] Vodafone, June Consultation response, page 12, paragraph 3.18
[376] Vodafone, June Consultation response, page 12, paragraph 3.21

Retail Residual business, is not objective, nor is it consistent with the treatment of sales of other assets such as the sales of copper from the access network. We do not therefore propose to revise our previous proposals in this consultation. We re-state these below for completeness.

Sales of Copper

Access copper

6.34 We note Vodafone's views about the materiality of access copper to current charge controls but consider its point about residual value is one of cost recovery, not cost attribution. As we explained in June windfall gains are a matter for future charge controls. We are therefore not going to address this as part of our review of BT's cost attribution methodologies. That is consistent with our views on BT's argument about the sales of property given above.

Core and backhaul copper

6.35 However, we have given further consideration to Vodafone's observation about the inconsistency of our proposals for the treatment of sales of property and copper.

6.36 Consistency of the Regulatory Financial Statements as a whole is one of the Regulatory Accounting Principles. Where possible there should be a consistent approach for the treatment of redundant assets including sales of property and sales of copper. For these assets cost causality is more difficult to assess as it is not clear what activities cause the costs to be incurred.

6.37 We agree with Vodafone that the current approach for sales of core and backhaul copper is not consistent with our proposed treatment of sales of property. We consider that BT's current treatment of sales of property is not objective as it attributes all of these to non-regulated services. These properties may have been used to provide regulated services and the costs of these buildings will then have been attributed to these services. It therefore does not seem appropriate that none of the benefits of these sales should accrue to regulated services.

6.38 We agree with Vodafone that the same arguments could apply equally to sales of backhaul and core copper. These cables would have been used to provide regulated services in the past: some of their costs would have been attributed to these services. Attributing all the sales to non-regulated services does not therefore seem appropriate.

6.39 The attribution of sales of core and backhaul copper is therefore not consistent with our proposed attribution of sales of property. A more consistent approach would be to attribute proceeds on the same basis as similar cables, i.e. fibre cables in the core and backhaul networks. This approach of attributing costs on the basis of similar assets within the network would also be consistent with the treatment of other spare or redundant assets. For example, unutilised duct space and spare fibre cables are attributed using current attributions of other assets within those ducts or other fibres within those fibre cables. It would also be consistent with the way that sales of copper from the access network are attributed.

6.40 Therefore, we consider that the attribution of sales of core and backhaul copper is not consistent with the treatment of similar costs within BT's Regulatory Financial Statements, notably with the sales of access copper and our proposal for sales of property. Consistency of the Regulatory Financial Statements as a whole is one of the Regulatory Accounting Principles. We therefore conclude that the current attribution is inappropriate.

Openreach Copper Recovery Team

6.41 At present the costs of the Openreach Copper Recovery Team are attributed to the Wholesale Residual business. While none of these costs are currently attributed to access network plant groups, sales of copper recovered from the access network are. We do not consider that this attribution is cost causal as it does not attribute the costs in accordance with the activities that cause the costs to be incurred. It would also not be consistent with our proposal on sales of core and backhaul copper as most of these sales would now be attributed to regulated businesses.

6.42 As a result we also do not consider that the current attribution of the costs of the Openreach Copper Recovery team is objective because it does not take account of all the available financial and operational data. We therefore consider that the attribution of the costs of the Openreach Copper Recovery Team to be inappropriate as the attribution is neither objective nor causal.

Our proposals

6.43 We propose alternative methodologies that we consider are consistent with the Regulatory Accounting Principles because they address the concerns and shortcomings that we have identified above in relation to BT's current methodologies.

Sales of Property

6.44 As noted above, we make no new proposals with respect to the attribution of sales of property. We restate the proposals for sales of property that we set out in our June Consultation for completeness below:

- BT must identify the type of building that the profits or losses from disposal relate to, i.e. whether the building is owned by TelerealTrillium or BT, and whether it is a general purpose or operational building; and

- BT must then allocate these disposal proceeds in the same way that the underlying costs for similar properties are allocated. By underlying costs we proposed that would be rent for TelerealTrillium owned buildings and depreciation for BT owned buildings.

Sales of Copper

6.45 We make two new proposals: one relating to the attribution of sales of core and backhaul copper and the other to the attribution of costs of the Openreach Copper Recovery Team. We make no proposals with respect to the attribution of sales of copper that has been removed from the access network or that associated with repayment works.

6.46 We propose that BT must attribute all sales of core and backhaul copper in the same way that the costs of backhaul and core fibre cables are attributed. By costs we mean the depreciation of these cables. We consider this proposal is objective because it includes all available and practicable information and is consistent with the attribution methodologies applied to other redundant assets.

6.47 We propose that BT must attribute the costs of the Openreach Copper Recovery team to plant groups in the same proportion as it attributes the sales of copper. We consider this proposal is both objective and causal as it includes all available and practicable information and attributes these costs in accordance with the activities which cause the costs to be incurred.

Impact of our proposal

Sales of Property

6.48 We noted in June that profits from disposal of property have been low and are forecast to remain low in the short to medium term. The exception is the recent sale of Keybridge House. As we have noted above, we do not believe that the attribution of the sales of this building to BT's Retail Residual business to be inappropriate. The impact of changing the attribution of the relatively low net profits from disposal of the remaining buildings in 2013/14 would not have significant impact on leased lines regulated markets. Nevertheless it is important that Regulatory Financial Accounting system includes information that allows the sales of property and the attribution of these sales to be monitored and reviewed in the context of future charge controls.

Sales of Copper

6.49 Sales of copper removed from BT's backhaul and core networks were large in 2013/14 though the net income was significantly lower. In 2014/15 net sales were £29m[377] with expectations that they would be minimal in 2015/16. The impact of our proposal would be to attribute a large proportion of these net sales to regulatory businesses, including Business Connectivity markets. However, as net sales are expected to be minimal in 2015/16 we consider that the impact on leased lines regulated markets would be minimal. As in general net sales are expected to be low the impacts on future market level costs will also be low: we expect these would be less than £1m in each market. We still consider that it is important that BT's regulatory accounts include relevant and appropriate data so that these costs can be monitored and investigated in the context of future charge controls.

Question 6.1: Do you agree that the current attributions of Sales of Copper, Sales of Property and costs of Openreach Copper Recovery Team are inappropriate? Please provide your reasons.

Question 6.2: Do you agree with our proposals for the attribution of Sales of Copper, Sales of Property and the costs of the Openreach Copper recovery team?

[377] https://www.btplc.com/News/ResultsPDF/q415-release.pdf

Section 7

Duct Valuation Methodology

Summary

7.1 BT uses the Duct Valuation Methodology to attribute duct costs between access, core and backhaul duct. The Duct Valuation Methodology attributed [✄ £50m to £500m] of depreciation and [✄ £5bn to £5.5bn] MCE in the 2013/14 Regulatory Financial Statements.

7.2 In this section we explain that part of the Duct Valuation Methodology is inappropriate because it does not use available information about circuit length when attributing costs between core and backhaul duct.

7.3 We propose that BT must take account of circuit length as well as circuit volume in the Duct Valuation Methodology when attributing duct costs between access, core and backhaul duct.

7.4 BT estimates that the impact of our proposed change to the attribution methodology would be an increase in the business connectivity markets of £2.2m of operating costs and £27.3m MCE, and in the fixed access markets a reduction of £2.9m operating costs and £36.9m MCE.

Background

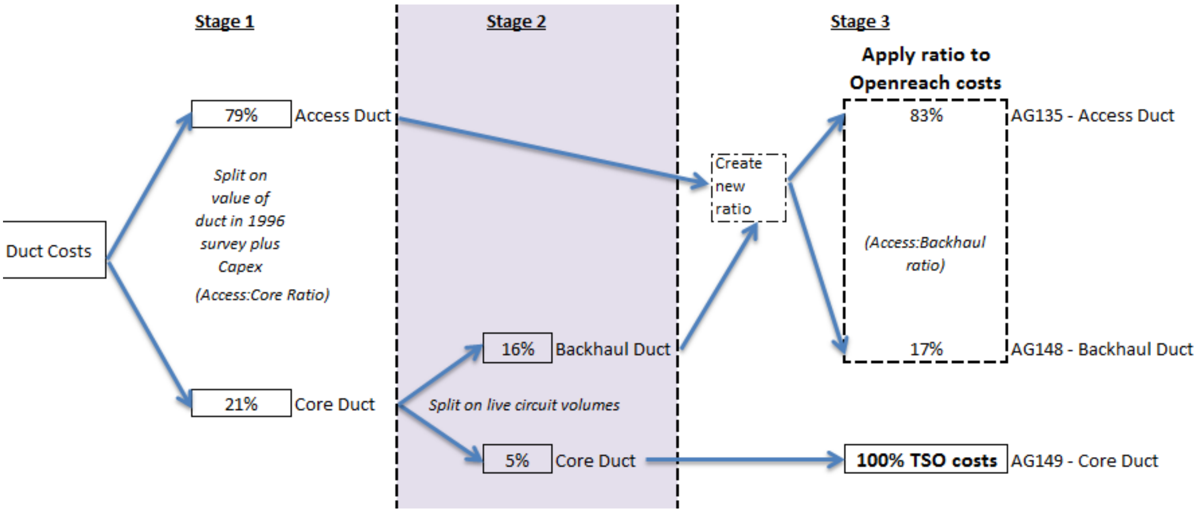
7.5 Duct is the pipe within which cables and other equipment are installed. Duct is run underground and comes in a variety of sizes. In its cost attribution system, BT attributes depreciation, pay, street work costs and MCE associated with duct to three parts of the network: access, core and backhaul using the Duct Valuation Methodology.[378]

7.6 Duct costs incurred by TSO are attributed to core, since TSO is responsible for looking after the core network. However, BT needs to attribute the duct costs incurred by other lines of business, in particular Openreach, between access and backhaul.

7.7 The Duct Valuation Methodology attributes these non-TSO duct costs in three stages, as illustrated in Figure 7.1.[379]

[378] BT refers to this as base methodology PDTDUCT. BT, Accounting Methodology Document 2015, page 91.
[379] BT, Model 018_OR_Duct, 29/09/2014.

Figure 7.1: Three stages of the Duct valuation methodology (2013/14 percentages)



7.8 In stage one, BT estimates the proportion of duct costs that relate to access and core on the basis of the GRC of access and core duct.[380] The split in 2013/14 was 79% access, 21% core.

7.9 In stage two, BT estimates the proportion of core duct that relates to backhaul and inner core (or simply 'core') on the basis of the number of live circuit volumes.[381] The split of core duct in 2013/14 using live circuit volumes was 76% backhaul and 24% core. As a proportion of all duct this gives 16% backhaul and 5% core (which together sum to the 21% of duct that relates to core from the first stage).

7.10 In stage three, duct costs incurred by TSO are attributed directly to core (activity group AG149). This means that the remaining non-TSO duct costs are split between access and backhaul by combining the ratios from the first and second stages. The resulting split in 2013/14 was 83% access and 17% backhaul.[382] Access duct is attributed to activity group AG135 and backhaul duct is attributed to activity group AG148.

7.11 In this section we are concerned with the second stage; the methodology used to split core duct between backhaul and core using live circuit volumes. [383]

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[380] Page 91 of BT's 2014/15 AMD explains that this split is based on the outputs of a duct study carried out by BT in 1996, augmented by capital expenditure incurred since then which is recorded on a class of work basis.
[381] Specifically trunk and distribution circuits.
[382] The access ratio of 79% from the first stage is combined with the backhaul ratio of 16% from the second stage. Combining these gives an access ratio of 83% (79%/(79%+16%)) and a backhaul ratio of 17% (16%/(79%+16%)).
[383] In paragraphs 10.10 to 10.16 of the June Consultation we said that BT should review the evidence it uses to split duct between access and core. At present this split is informed by the outputs of a duct study carried out by BT in 1996. We considered that BT may have more recent information on duct that it could use, such as that recorded in its geographical information system known as the Network Engineering Journey (NEJ). We will continue to explore with BT the possibility of using NEJ (or an alternative system) to inform the split of duct between access and core in the first stage of the Duct Valuation Methodology.

What we said in June

7.12 In June, we said that it may be inappropriate to attribute duct costs between core and backhaul on the basis of the number of live circuits alone.[384]

7.13 We said that while the number of live circuits would give an indication of the appropriate attribution, it was not clear whether circuit length had also been taken into account.[385] We considered it was important to take into account circuit length as well as the number of circuits because it was not clear that duct would contain the same proportions of core and backhaul circuits over different distances.[386] In other words, we considered that the depreciation and MCE associated with duct is linked to the size of duct (as indicated by the number of circuits using the duct) and the length of duct (as indicated by the length of the circuits).

7.14 We also noted Cartesian's comment that taking into account circuit length when attributing duct would be consistent with the attribution of core and backhaul fibre costs which are attributed between 20CN and 21CN networks using both the number of fibre circuits and the length of those circuits.

7.15 We said that we would engage with BT to understand whether circuit length was taken into account when attributing duct costs between core and backhaul and if not, whether it was practicable to do so.[387]

Stakeholder comments

7.16 BT said "while we consider that our current data source is appropriate, we will work with Ofcom to assess the suitability of alternative sources that could be used for future valuations".[388]

7.17 Vodafone said that it "would welcome greater clarity over the distinction between backhaul duct and inner core duct, and the allocation of each type of duct to regulated and unregulated services."[389] This was because there are different descriptions of backhaul and inner core duct in BT's DAM and the Undertakings.[390] This makes it difficult to understand the cost allocations that are applied. Vodafone said that "the services voice origination and termination, WBA, and Ethernet main link, are allocated part of the cost of Backhaul duct, but none of the cost of Inner Core duct. It is not clear how these services can be delivered without linkages between core nodes." [391]

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[384] June Consultation, page 92, paragraph 9.113
[385] June Consultation, page 92, paragraph 9.116
[386] June Consultation, page 92, paragraph 9.116
[387] June Consultation, page 92, paragraph 9.118
[388] BT, June Consultation response, page 37, paragraph 132
[389] Vodafone, June Consultation response, page 15
[390] Ofcom, Undertakings,
http://stakeholders.ofcom.org.uk/binaries/telecoms/policy/bt/btundertakings.pdf
[391] Vodafone, June Consultation response, pages 15 and 16, paragraphs 4.12 to 4.17
http://stakeholders.ofcom.org.uk/binaries/consultations/cost-attribution-review/responses/Vodafone_Response_to_CAR_consultation_of_12_June_2015.pdf, Page 16 footnote "Per Appendix E, 2012/13 Detailed Attribution Methods, Openreach Backhaul Fibre (PG170B) is allocated to a range of network components, including Remote - local transmission

Ofcom's response and assessment

7.18 In this section we first clarify the difference between core and backhaul duct and then we explain why we consider that BT's approach to estimating the amount of core duct that relates to core and backhaul is inappropriate.

Core and backhaul duct

7.19 A distinction exists between backhaul and core because the Undertakings set out that Openreach is responsible for the assets in the Physical Layer of the Backhaul Network and the Access Network. The Undertakings define the Backhaul Network as one that runs from a BT Local Access Node to i) another BT Local Access Node, ii) a BT Core Node or iii) another Communication Provider's point of handover (subject to distance limitations). The current SMP regulation in place based on the 2013 BCMR Statement sets out in further detail the definition of core nodes.[392] Openreach backhaul products and some Openreach access products use connections that are classified as Backhaul Network Physical Layer.

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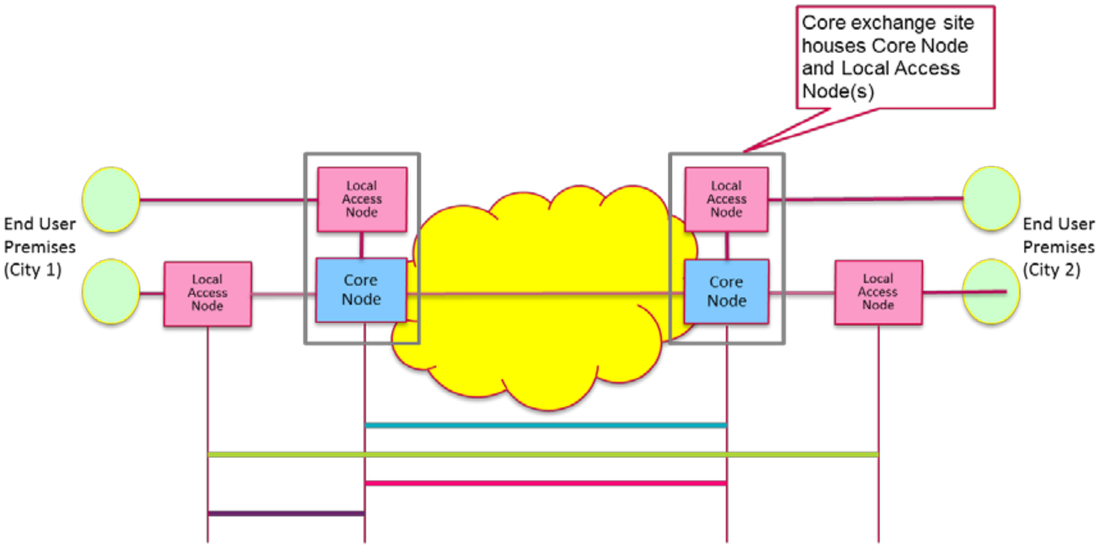
length (CO326) (allocated to call origination and termination per the Current Cost Financial Statements), Broadband backhaul circuits (CCO681) (allocated to WBA per the Current Cost Financial Statements), and Ethernet main links (CO484)."

[392] Ofcom, Business Connectivity Market review 2013, Section 12, paragraph 12.124 onwardshttp://stakeholders.ofcom.org.uk/binaries/consultations/business-connectivity/statement/Sections8-16.pdf

Figure 7.2: Schematic of core and backhaul networks



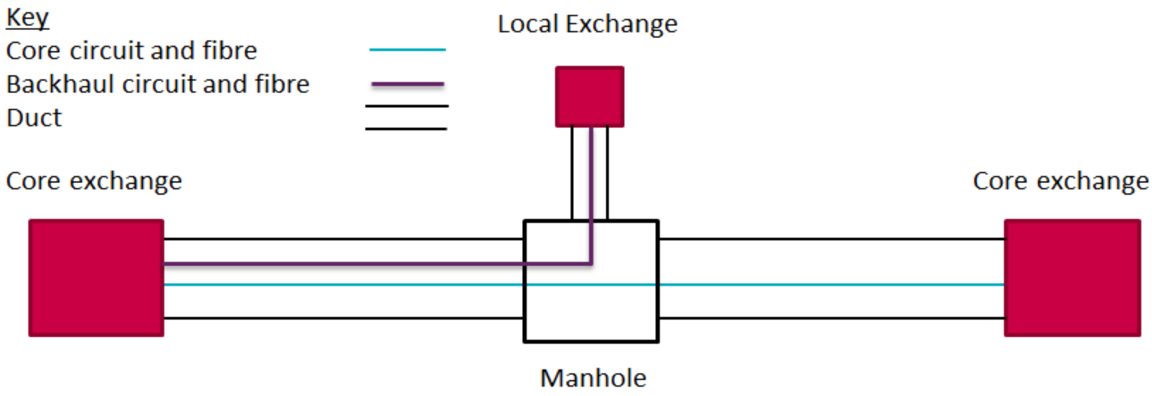
Key

- **Green** line - Fibre connecting two Local Access Nodes across core exchange sites providing Mainlink part of an access service product. BT classifies this as Backhaul Network
- **Purple** line - Fibre connecting a Local Access Node to the first Core Node supporting Backhaul Product. BT would classify this as Backhaul Network.
- **Pink** line - Fibre connecting two Local Access Nodes located in core exchange sites providing Mainlink part of an access service. BT would classify as Backhaul Network
- **Blue** line - Fibre connecting two Core Nodes only in support of core network services. BT would classify as core network (i.e. not Backhaul Network or Local Access Network)

7.20 While the Physical Layer of the Backhaul Network primarily consists of the duct and fibre providing the connectivity, the physical duct used can rarely be identified as either core or backhaul (or even access in many cases).[393] For example, as shown in figure 7.3, for much of the length of a circuit, one cable (in a single duct) could contain one fibre that provides backhaul connectivity and another that provides core connectivity.

[393] BT Response dated 29 October 2015

Figure 7.3: Duct shared between services



7.21 Given this shared nature, BT needs a way of attributing the costs associated with duct to the different types of network (such as core and backhaul) and eventually those products that use it.

Is the current Duct Valuation methodology inappropriate?

7.22 BT has confirmed that, when estimating the amount of core duct that relates to inner core and backhaul, the current methodology takes into account the number of live circuits but not the circuit length.[394]

7.23 From a causality perspective, we consider that the cost of building duct is associated with the size of the duct (i.e. its cross-sectional area) and the length of the duct. The current methodology for estimating the amount of core duct that relates to inner core and backhaul only takes account of the size of the duct (via the number of live circuits it carries) and does not take account of the length of the circuits.

7.24 BT has told us that it would be practicable to take account of circuit length when estimating the amount of core duct that relates to inner core and backhaul since this information is included in its systems.[395]

7.25 Since the length of circuits could vary between inner core and backhaul, we consider the existing methodology is inappropriate.

Our proposal

7.26 We therefore propose that BT must take into account circuit length as well as circuit volumes when estimating the amount of core duct that relates to inner core and backhaul.

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[394] BT response dated 29 October 2015

[395] BT says that information on circuit lengths is included in the Core Transmission Circuit costing System (CTCS), BT response dated 10 August 2015. BT's 2013/14 DAM describes CTCS on pages 265 and 266.

Impact of our proposal

7.27 The existing methodology of splitting core duct between inner core and backhaul duct using the number of live circuits gives a split of 24% inner core and 76% backhaul. Taking into account the length of live circuits as well as the volume of live circuits gives a split of 20% core and 80% backhaul.

7.28 The increase in the percentage of core duct that relates to backhaul as a result of taking into account circuit length implies that backhaul circuits are longer than core circuits. This is contrary to our expectation that core circuits are longer as they run between most of the UK's major cities. However, Figure 7.2 indicates that backhaul circuits can run between core nodes as well as between local exchanges. This means that some backhaul circuits could to be longer than core circuits. We will continue to work with BT to better understand this information.

7.29 BT has estimated that the main impact of taking into account circuit length in the attribution of core between inner core and backhaul is to reduce costs in fixed access markets (operating costs down £2.9m and MCE down £36.9m) while increasing costs in business connectivity markets (operating costs up £2.2m and MCE up £27.3). Overall, operating costs in regulated markets reduce by £0.1m. These estimates are shown in Table 7.1.

Table 7.1 Estimate of market impact of Duct valuation proposal, £m

	Fixed access	Business connectivity	Narrow-band	WBA 1 and 2	Wholesale residual	Retail Residual
CCA operating costs	(2.9)	2.2	0.4	0.3	0.1	0.0
Mean Capital Employed	(36.9)	27.3	4.7	3.6	1.3	0.0

Documentation

7.30 We agree with Vodafone, that BT's Accounting Methodology Documents could better explain which parts of BT are responsible for i) different products in different parts of the network and ii) expenditure on duct and fibre in different parts of the network and to which parts of BT costs of different types of duct should be attributed.

7.31 We expect BT to address these points in its 2015/16 Accounting Methodology Documents. Should BT not adequately address these points we will consider whether more prescriptive actions may be appropriate.

7.32 In relation to the particular services identified by Vodafone, we note the following:

- Ethernet main link is part of an access product provided by Openreach that runs between two local exchanges. As the Undertakings classify this as a Backhaul Network it is appropriate that the duct attributed to this network and service is 'backhaul' duct rather than 'core' duct. We note the possibility that the physical duct could be used for both core and backhaul services.

- IPstream (WBA) includes backhaul duct within the cost component 'Broadband backhaul circuits'. However, it also includes core duct within the component Inter ATM transmissions (CO316).

- Call origination and termination services include backhaul duct costs within the component Remote – Local transmission length (CO326) and core duct costs in the component and MSAN - POSI (dense) length voice (CN862).

- PPC distribution services, such as Netstream 16 LL 155mbit rentals per km, include backhaul duct costs within the component OR PC rentals 140Mbit/s distribution (CF375) and core duct costs in the component PC rental 140Mbit/s link per km distribution (CR375).

- PPC trunk services, such as Netstream 16 LL 155mbit rentals Trunk, include only core duct costs within the components PC rentals 140Mbit/s regional trunk (CG103) and PC rentals 140Mbit/s national trunk (CG203).

Question 7.1: Do you agree that the Duct Valuation Methodology is inappropriate and, if so, do you agree with our proposal that it should be amended to take into account circuit length?

Section 8

Openreach and TSO software

Summary

8.0 All software development in BT is carried out by TSO. In 2013/14 TSO recorded [✂£50m to £500m] of software depreciation costs and [✂£50m to £500m] of software MCE. Approximately 36% of this software related to TSO itself and 30% related to Openreach.

8.1 In this section we explain that the attribution of Openreach software is inappropriate because:

- BT does not allocate Openreach software costs directly to product or asset groups where the information it holds demonstrates that such costs are associated with those product or asset groups.

- BT does not attribute shared Openreach software costs to all the products that the relevant software supports.

8.2 We also explain that the attribution of TSO software is inappropriate because BT does not allocate TSO software directly to product groups, asset groups or lines of business where the information it holds demonstrates that such costs are associated with those product groups, asset groups or lines of business.

8.3 For both Openreach and TSO we propose that BT should allocate software directly to product or asset groups where the information it holds demonstrates that such costs are associated with those product or asset groups. For Openreach software we also propose that BT should attribute software that is shared across a number of products to all the products that the relevant software supports.

8.4 Following a review of the models used by BT, and taking into account suggestions made by BT, we asked BT to estimate the impact of specific changes that we consider are consistent with our proposals.

8.5 BT estimates that the impact of our proposals is to move £13.1m of operational costs and £31.1m of MCE out of regulated markets.

Background

8.6 All software development is carried out by BT TSO and TSO recharges other lines of business for work undertaken on their behalf. In 2013/14 TSO recorded [✂£50m to £500m] of software depreciation costs and [✂£50m to £500m] of software MCE.[396] These costs need to be attributed to the lines of business to which they relate.

[396] We have estimated these amounts using the classes of work COMPG (externally purchased software) and COMPS (internally developed software).

8.7 In 2013/14, approximately 36% of software costs related to TSO itself (for example to support the core assets managed from TSO), while 30% related to Openreach, 16% to BT Wholesale, 3% to BT Group and the remaining 15% related to BT Retail and Global Services.

8.8 In this section we have focused on the attribution of software costs in Openreach and TSO since the majority of BT's software costs relate to these lines of business and Cartesian's review identified potential concerns in these areas.[397]

8.9 Software costs relating to TSO are attributed to the activity group AG102 (TSO Operational Costs) along with other TSO operational costs. All costs from this activity group are attributed on the basis of the net book value of TSO fixed assets.[398]

8.10 Software relating to Openreach is broadly categorised as being either specific to particular product or asset groups, shared across products or general software. Using the SOFTDEP methodology[399] these Openreach software types are attributed in the following ways:

8.11 Software specific to particular product or asset groups is directly allocated. In 2013/14, approximately 25% of Openreach software cost was directly allocated to product groups or asset types. For example software associated with access duct is directly allocated to activity group AG135 (Access Duct) and software associated with NGA FTTC is directly allocated to the plant group PG197A (FTTC Service Delivery & Development).

8.12 Shared software is apportioned across relevant products. In 2013/14, approximately 52% of Openreach software was identified as supporting a number of different Openreach products. These 'shared software' costs are apportioned to products on the basis of the software depreciation costs of the relevant products.

8.13 General software is attributed across all of Openreach. In 2013/14, approximately 23% of Openreach software cost related to Openreach support functions or could not be associated with specific product or asset groups. These general Openreach software costs are attributed to AG410 (Openreach General Software). Costs from this activity group are attributed across Openreach using the Pay and ROA methodology that we have reviewed in section 4.

What we said in June

8.14 In June we made some high level comments about the attribution of software costs in Openreach and TSO because Cartesian had identified some potential concerns with the methodologies used to attribute such costs in these lines of business.

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[397] We note that all of the BT Retail and BT Global Services software costs are attributed to residual markets. BT Group software is included in AG112 (Corporate overheads) and we have reviewed costs in AG112 in section 4. BT Wholesale software costs are attributed using a similar method to Openreach (2015 AMD, page 122, SOFTDEP All K OUCs)

[398] BT, Accounting Methodology Documents 2015, page 125

[399] BT, Accounting Methodology Documents 2015, page 122. The SOFTDEP methodology is described on pages 363 – 365 of the Cartesian report.

8.15 In relation to Openreach software we said we needed to engage further with BT to understand how costs were attributed, in particular how software shared across products was attributed.[400]

8.16 In relation to TSO software, we noted that all costs were attributed to AG102 (TSO Operational Costs) and that this appeared inconsistent with the approach taken to attribute Openreach software costs. We considered that it may be possible to directly allocate some TSO software costs to products but that the information available to us did not allow us to determine this.[401] We said that we would continue to work with BT to understand the nature of TSO software costs before making any proposals.[402]

Stakeholder comments

8.17 BT said that it considered the attribution of software costs was appropriate and consistent with the Regulatory Accounting Principles.[403]

8.18 TalkTalk considered that it should be possible to directly allocate Openreach software costs to products.[404]

Our response and assessment

8.19 In this section we consider whether the attribution of software costs within Openreach and TSO is inappropriate. Where we consider that the current attribution method is inappropriate, we propose an alternative.

Whether the attribution of software costs in Openreach is inappropriate

8.20 As set out above, Openreach software costs are broadly categorised and attributed in three ways:

- Software specific to particular product and asset groups is directly allocated.
- Shared software is apportioned across relevant products.
- General software is attributed across all of Openreach.

8.21 We consider that the high-level categorisation of Openreach software into product specific, shared and general categories is reasonable. However, as explained below, we do not consider that BT has appropriately categorised software into these three categories.

8.22 BT uses a manual process to assign Openreach software costs to these categories. This assignment is currently based on the description of the software asset in the fixed asset register.[405] We understand that the descriptions of software in the fixed asset register are not always sufficient to be able to identify whether the software

[400] June Consultation, page 90, paragraphs 9.98, 9.99 and 9.103
[401] June Consultation, page 90, paragraph 9.100
[402] June Consultation, page 91, paragraph 9.104
[403] BT, June Consultation response, paragraph 129
[404] TalkTalk, June Consultation response, page 20, paragraph 3.86
[405] BT response dated 10 August 2015

relates to a specific product or not. However, BT has told us that it assessing whether it is possible to link items on the fixed asset register to the more detailed information on software held in TSO such that it will be easier to appropriately categorise Openreach software assets in line with the three categories set out above.[406]

8.23 Working with BT, we have reviewed the Openreach software costs that BT currently records against each of these three categories.

Product specific software

8.24 In 2013/14, approximately 25% of Openreach software cost was directly allocated to specific product or asset groups. This includes, for example:

- Software supporting duct assets. These costs are attributed to access and backhaul duct activity groups (AG135 and AG148 respectively).
- Software supporting NGA products. These costs are attributed to the plant groups associated with NGA products: PG197A (FTTC Service Delivery & Development) and PG198 (FTTP Development).
- Software supporting Openreach service centres which is attributed to a number of plant groups relating to Openreach service centres.[407]

8.25 We have not found any particular concerns with the software assets that BT currently allocates directly to specific product or asset groups.

Shared software

8.26 In 2013/14, approximately 52% of Openreach software cost was categorised as being shared across products.

8.27 Having reviewed the model supporting BT's attributions we now understand that this category includes software that can be directly associated with the LLU, WLR, Ethernet and ISDN2 product groups as well as some software that is genuinely shared across a number of products. However, at the moment all software costs included in this 'shared software' category are subsequently only attributed to LLU, WLR and Ethernet product groups.

8.28 Following our review we consider that this category inappropriately includes software that relates to specific product groups namely LLU, WLR, Ethernet and ISDN2. These costs should be directly allocated to the relevant cost categories for these product groups. We also note that although this category includes specific ISDN2 software costs, none of these costs are attributed to ISDN2 since costs from this 'shared software' category are only attributed to LLU, WLR and Ethernet products.

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[406] BT response dated 9 October 2015. BT said that each software asset developed by TSO can be associated with a specific code (a 'SALSA' ID) and recorded on the fixed asset register using this code. SALSA stands for 'Single List of Authorised Systems and Applications' and is the approved database of every IT System used in BT

[407] For example, plant groups PG572B (OR Service - Provision LLU) and PG577B (OR Service - Assurance LLU).

8.29 In addition, we consider that the software costs in this category that are genuinely shared across a number of products are inappropriately attributed to a narrow subset of those products. For example, one of the shared software assets relates to the 'equivalence management platform' and we understand that this relates to ISDN and NGA products as well as the LLU, WLR and Ethernet product groups to which it is currently attributed.[408]

General software

8.30 In 2013/14, approximately 23% of Openreach software cost was categorised as general software. These costs are all attributed to the activity group AG410 (Openreach General Software) and subsequently attributed using the Pay and ROA methodology that we have reviewed in section 4.

8.31 BT told us that the software cost attributed to AG410 in 2013/14 included fixed costs associated with testing Openreach software and an engineering tool called Artisan.[409] These examples appear to be non-specific and used across Openreach.

8.32 During our review we identified that in 2013/14 AG410 included a small amount of software that appeared to relate to BDUK and we considered that this should be directly allocated to NGA products rather than included in AG410. BT has confirmed that in 2014/15 all BDUK software costs have been attributed to NGA products.[410]

8.33 We did not identify any other software costs included in AG410 that did not appear to be general in nature.

Provisional conclusion on whether the attribution of software costs in Openreach is inappropriate

8.34 While we consider that the categories used by BT to attribute Openreach software costs are reasonable, in light of the above we consider that the attribution of Openreach software costs is inappropriate because:

8.35 BT does not allocate software costs directly to product or asset groups where the information it holds demonstrates that such costs are associated with those product or asset groups.

8.36 BT does not attribute shared software costs to all the products that the relevant software supports.

8.37 For these reasons we consider that the current attribution of Openreach software costs does not comply with the Regulatory Accounting Principles of causality or objectivity.

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[408] While NGA software costs are currently directly attributed to NGA products, they do not receive an appropriate attribution of shared software costs - BT response dated 9 October 2015 (Q11)
[409] BT response dated 9 October 2015 (Q11). Artisan is described on page 253 of BT's 2013/14 DAM.
[410] BT response dated 10 August 2015 (Q10).

Proposal for Openreach software

8.38 We make two proposals in relation to Openreach software.

- BT should allocate Openreach software costs directly to product or asset groups where the information it holds demonstrates that such costs are associated with those product or asset groups.

- BT should attribute Openreach software that is shared across a number of products to all the products that the relevant software supports.

8.39 Our review has identified some specific changes that need to be made consistent with these proposals. These are shown in Table 8.1. However, we expect BT to investigate whether any further changes need to be made to the categorisation of Openreach software in order to comply with these proposals.[411]

8.40 BT has estimated the impact of the specific changes set out in Table 8.1. These impacts are set out at the end of this section.

Table 8.1: Specific changes we have identified consistent with our proposals for Openreach software, 2013/14

Software type	Depreciation £m	% of Openreach software	Current treatment	Proposed treatment
LLU, WLR, Ethernet, ISDN2	[✂]£10m to £50m	30%	Shared across WLR, LLU and Ethernet product groups	Directly attribute to relevant product groups
Shared software	[✂]£10m to £50m	22%	Shared across WLR, LLU and Ethernet product groups	Shared across WLR, LLU and Ethernet, ISDN2 and NGA product groups

Whether the attribution of software costs in TSO is inappropriate

8.41 As set out above, all TSO software costs are currently included in AG102 (TSO Operational costs) and attributed across TSO on the basis of the net book value of TSO assets. This approach differs from Openreach where software is categorised into software that is i) specific to particular product or asset groups, ii) shared across particular products or assets and iii) general software.

8.42 We asked BT if it was possible to identify TSO software costs with specific products or assets. BT said it had reviewed the fixed asset register and considered that it was possible to categorise TSO software against one of the following categories: i) software specific to product or asset groups, ii) ‘operational’ software supporting core network infrastructure in TSO, iii) software used by TSO support functions and other

[411] As set out above, BT is currently assessing whether it is possible to link items on the fixed asset register to the more detailed information on software held in TSO so that it would be easier to identify the specific software assets included on the fixed asset register.

lines of business.[412] Following an initial review, BT suggested that TSO software could be attributed as shown in Table 8.2.

Table 8.2: BT's suggested attribution of TSO software, 2013/14

Software category	Depreciation £m	Depreciation %	Suggested treatment
Product/asset specific	[✂] £10m to £50m	43%	Direct to relevant products/assets
Operational/TSO infrastructure	[✂] £10m to £50m	35%	AG102 (TSO operational costs)
Line of business specific:	[✂] £10m to £50m	22%	
- TSO support functions	[✂] £10m to £50m	*13%*	*AG103 (TSO support functions)*
- Group	[✂] £0m to £10m	*5%*	*AG112 (Corporate overheads)*
- BT Wholesale	[✂] £0m to £10m	*1%*	*AG409 (BT Wholesale general software)*
- Wholesale Residual	[✂] £0m to £10m	*1%*	*Residual*
- BT Business/BT Consumer	[✂] £0m to £10m	*1%*	*Residual*
- Global Services	[✂] £0m to £10m	*1%*	*Residual*
Total	[✂] £50m to £100m	100%	

Source: BT response dated 9 October 2015 (Q12).

8.43 In light of the above we consider that the attribution of TSO software costs is inappropriate because BT does not allocate software directly to products, assets or lines of business where it has the information to do so.

8.44 For this reason we consider that the current attribution of TSO software costs does not comply with the Regulatory Accounting Principles of causality or objectivity.

Proposal for TSO software

8.45 We propose that BT should allocate TSO software directly to product groups, asset groups or lines of business where the information it holds demonstrates that such costs are associated with those product groups, asset groups or lines of business.

8.46 We consider that BT's suggested attribution of TSO software costs shown in Table 8.2 would be consistent with this proposal because:

- TSO software that relates to specific product or asset groups would be directly allocated to the cost category associated with those product or asset groups. For example WBC (BT Design) Internal Development Costs to WBC product groups and Harmonised Ethernet to 21CN product groups.

- TSO software costs that support core network infrastructure would be attributed to AG102 (TSO Operational costs) and subsequently attributed on the basis of TSO fixed assets.

- TSO software costs relating to TSO support functions would be attributed to AG103 (TSO Support functions) and software relating to other lines of business would be attributed to the relevant cost category for that line of business (e.g. AG112 in the case of Group functions). We would expect the attributions of

[412] BT response dated 9 October 2015 (Q12).

software cost from AG103 and AG112 to be consistent with the proposals made in section 4.

8.47 We also consider that BT's suggestion would mean that the attribution of TSO software costs would be consistent with that for Openreach software.

8.48 BT has estimated the impact of the changes set out in Table 8.2. We recognise that, in light of any improvements BT makes to the process of recording software assets in the fixed asset register, it may wish to propose refinements to the suggestions it has made at Table 8.2. BT's estimates of the impact are set out in the next sub-section.

Impact of our proposal

8.49 BT's estimates of the impact of our proposals relating to Openreach and TSO software are set out below.

Openreach software

8.50 BT estimates that our proposal will reduce operational costs by £6.1m and MCE by £19.9m in regulated markets. The impact on Business Connectivity markets is to reduce operating costs by £3.2m and MCE by £10.4m.

Table 8.3: Impact of our proposals relating to Openreach software

	Fixed access	Business connectivity	Narrow -band	WBA 1 and 2	Wholesale residual	Retail Residual
CCA	(2.7)	(3.2)	0.0	(0.2)	6.1	0.0
Mean Capital Employed	(8.8)	(10.4)	0.0	(0.8)	19.9	0.0

TSO software

8.51 BT estimates that our proposal will reduce operational costs by £7.0m and MCE by £11.2m in regulated markets. The impact on Business Connectivity markets is to reduce operating costs by £4.4m and MCE by £7.0m.

Table 8.4: Impact of amending the TSO Software Depreciation attribution

	Fixed access	Business connectivity	Narrow-band	WBA 1 and 2	Wholesale residual	Retail Residual
CCA	(12.4)	(4.4)	1.2	8.6	5.5	1.5
Mean Capital Employed	(19.8)	(7.0)	1.9	13.7	8.8	2.4

Question 8.1: Do you agree that the attribution of software costs in Openreach and TSO is inappropriate? If so, do you agree with our proposals?

Section 9

Fibre Gross Replacement Cost

Summary

9.1 BT uses the Fibre Gross Replacement Cost (GRC) Methodology to attribute access (spine and distribution) fibre depreciation, maintenance and MCE costs between NGA and Non NGA services. The Fibre GRC Methodology attributed [✂ £50 to £500m] of operational costs and [✂ £1bn to £1.5bn] of MCE in the 2013/14 Regulatory Financial Statements.

9.2 In this section we explain that it is inappropriate to apply the Fibre GRC Methodology to distribution fibre because it does not take account of the different asset lives of NGA and non-NGA distribution fibre cables. We also explain that it is inappropriate to apply the Fibre GRC Methodology to spine fibre because it does not appropriately reflect the amount of NGA and non-NGA traffic.

9.3 We propose that i) BT attributes distribution fibre costs between NGA and non-NGA in a way that takes account of the different assets lives and ii) BT attributes spine fibre between NGA and non-NGA in proportion to the volumes of NGA and non-NGA distribution fibres.

9.4 BT estimates that the impact of our proposals would be to increase operational costs in regulated markets by £0.1m but decrease the MCE by £72.5m. The business connectivity markets are impacted most by this change.

Background

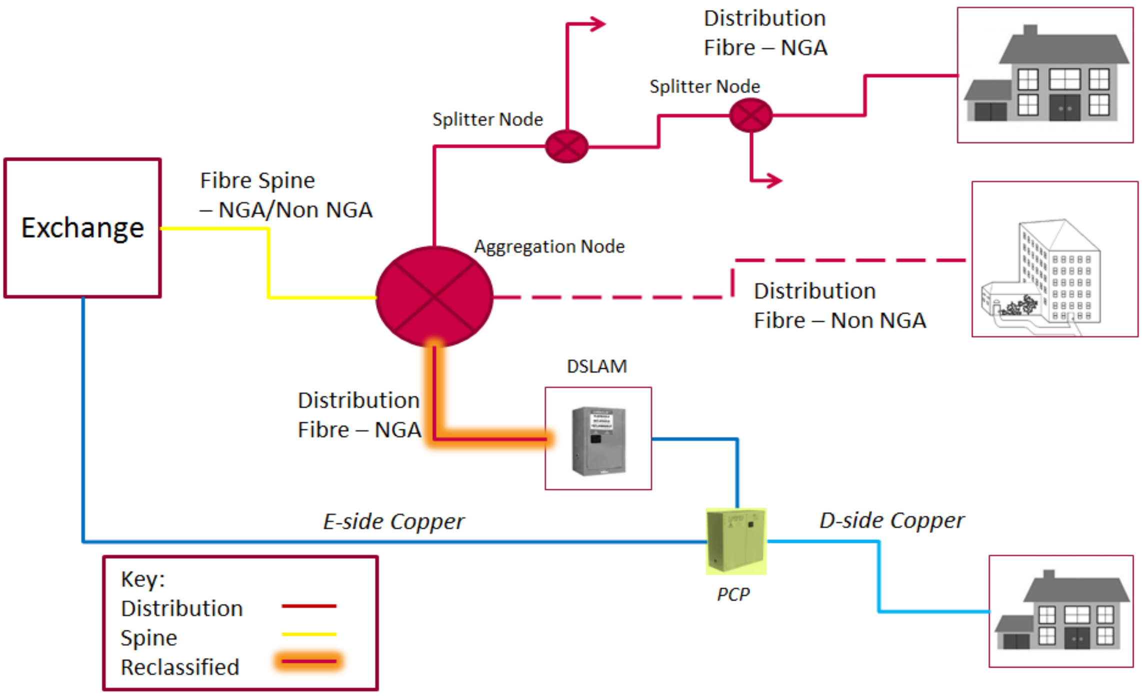
9.5 Fibre cables on the customer side of the exchange are referred to as access fibre and these fibre cables are split into two categories; spine fibre and distribution fibre.[413] Spine and distribution fibre are illustrated in Figure 9.1.

9.6 Spine fibre cables run between the exchange and the fibre aggregation node. The fibre aggregation node is usually located in a street level manhole and allows the signal to be split to run to FTTP, FTTC or as a private circuit for a business.

9.7 Distribution fibre cables run from the fibre aggregation node towards a residential or business customer's premises (via a DSLAM in the case of FTTC fibres, which is separate from the aggregation node).

[413] We understand that fibre cables can carry between 2 and 256 individual glass fibres bound together.

Figure 9.1: Access fibre and copper networks.



9.8 Spine and distribution fibre are further split between Next Generation Access (NGA)[414] fibre and non-NGA fibre. NGA fibre is deployed for Generic Ethernet Access (GEA) and generally refers to broadband products that provide a maximum download speed that is greater than 24 Mbit/s. [415]

9.9 BT attributes spine and distribution fibre costs associated with depreciation, maintenance and assets (MCE) between NGA and non-NGA using the Fibre GRC Methodology, as follows:

- Distribution fibre costs are split between NGA and non-NGA using the ratio of NGA fibre GRC and non-NGA fibre GRC. BT said that it is able to separately identify the NGA and non-NGA GRC for distribution fibre. [416]

- Spine fibre costs are split between NGA and non-NGA using the ratio of distribution fibre NGA/non NGA GRC. BT said that it is not able to separately identify NGA and non-NGA spine fibre cables, so it uses the GRC ratio applied to distribution fibre.[417]

9.10 Table 9.1 shows that the amount of depreciation, MCE and maintenance costs in 2013/14 associated with spine and distribution fibre that are attributed between NGA and non-NGA using the Fibre GRC methodology. The table shows that the main application of the Fibre GRC methodology is to access fibre depreciation and MCE, with only a small amount of access fibre maintenance being attributed.

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[414] NGA is also known as superfast broadband.
[415] Ofcom, 'Review of the wholesale local access market' October 2010, Paragraph 2.8, page 10: http://stakeholders.ofcom.org.uk/binaries/consultations/wla/statement/WLA_statement.pdf
[416] BT response dated 12 November 2014 to Cartesian question 48.
[417] BT response dated 4 September 2015

Table 9.1: Access fibre costs, 2013/14, £m

<table>
<tr><th></th><th>Depreciation</th><th>MCE</th><th>Maintenance</th></tr>
<tr><td>Spine fibre</td><td>[✂] £10m to £50m</td><td>[✂] £250m to £300m</td><td rowspan="2">[✂] £0m to £10m</td></tr>
<tr><td>Distribution fibre</td><td>[✂] £50m to £100m</td><td>[✂] £500m to £1bn</td></tr>
</table>

Source: Ofcom using data provided by BT

What we said in June

9.11 In June, we considered whether the Fibre GRC Methodology was inappropriate in relation to the following principles: causality, consistency and accuracy.

Causality

9.12 We said that the use of the Fibre GRC Methodology to attribute fibre depreciation and MCE between NGA and non-NGA appeared to be inappropriate because it did not take account of the differences in asset lives used by BT.[418] BT uses assets lives of 5 to 20 years for fibre cable.[419]

9.13 We also said that the use of the Fibre GRC methodology to attribute fibre maintenance costs between NGA and non-NGA appeared to be inappropriate because older assets may require more maintenance than newer assets; a difference which would not be reflected by attributing maintenance costs using fibre GRC. [420]

Consistency

9.14 We noted that Cartesian had said that the Fibre GRC methodology appeared inconsistent with other approaches used by BT to attribute fibre-related costs between old and new networks. For example, Cartesian said that BT uses fibre length to attribute backhaul and core fibre costs between 20CN and 21CN networks and uses fibre depreciation to attribute access duct between NGA and non-NGA fibre.[421]

9.15 We considered that there may be objective reasons for these different methodologies, such as different levels of available data.[422] For example, while BT can separately identify access fibre cables, it cannot separately identify backhaul and core fibre cables since these are carried on shared cables.[423] We also said that in the event of any conflict between the Regulatory Accounting Principles, priority would be given to objectivity over consistency.[424] We therefore considered that attributing access fibre in a different way to, for example, core and backhaul fibre would be objective and therefore justified.[425]

[418] June Consultation, page 96, paragraph 9.141
[419] BT, Regulatory Financial Statements 2013/14, Additional Financial Information, schedule 11
[420] June Consultation, page 96, paragraph 9.140
[421] June Consultation, page 96, paragraph 9.138
[422] June Consultation, page 96, paragraph 9.142
[423] BT response 29 October 2015
[424] June Consultation, page 97, paragraph 9.144
[425] Since June we have confirmed that access duct is attributed to NGA and non-NGA fibre plant groups on a basis consistent to access fibre, that is, in proportion to the fibre GRC. It is the split of

Accuracy

9.16 We wanted to understand why the volume of NGA spine fibre cables had fallen from [✂] in 2012/13 to [✂] in 2013/14 (a 95% reduction).

9.17 BT told us that the majority (70-75%) of the reduction in NGA spine fibre volumes in 2013/14 was the result of some FTTC (fibre to the cabinet) fibre cables being reclassified from NGA spine fibre to NGA distribution fibre.[426] The remaining reduction was the result of some NGA fibre being reclassified to non-NGA fibre as BT said it had improved the identification of newer fibre in its management systems.[427] Following BT's explanation, we did not have any accuracy concerns.

Stakeholder comments

9.18 BT considered that the Fibre GRC Methodology was "appropriate and consistent with the Regulatory Accounting Principles and will work with Ofcom to supply the information that it requires in its additional investigation work."[428]

9.19 Vodafone made three points. First, it did not understand how the reclassification of FTTC fibre from NGA spine fibre to NGA distribution fibre could be justified given that[429]:

- FTTC Fibre is by definition fibre that runs from the local exchange to the cabinet.
- NGA spine fibre is by definition fibre that runs from the local exchange to the cabinet.
- NGA distribution fibre is by definition fibre that runs from the cabinet to customer premises.

9.20 Second, it did not understand why spine fibre was split between NGA and non-NGA fibre using the GRC ratio of distribution NGA fibre and distribution non-NGA fibre. It considered that this would be inappropriate if FTTC only used spine fibre.[430]

9.21 Third, Vodafone also questioned whether the Fibre GRC methodology produced plausible valuations of the amounts of NGA fibre used by BT. Vodafone said that the current methodology implied that around £115m of the total fibre MCE of £1,132m related to NGA access fibre. Vodafone considered that it was hard to reconcile the

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access duct between spine and distribution fibre that is carried out on the basis of in year fibre depreciation. Any changes to the attribution of access fibre will also be reflected in the attribution of access duct.

426 BT, Information included in BT's ASIG paper RA14-088 provided to Ofcom on 25 August 2015

427 The volume of fibre cables is obtained from BT's Integrated Network Systems (INS). See page 280 of BT's 2014 DAM.

428 BT, June Consultation response, page 36, paragraph 129

429 Vodafone, June Consultation response, page 17, paragraph 4.23

430 Vodafone, June Consultation response, page 18, paragraph 4.25

£115m (even after making an allowance for the cost of NGA equipment) to the £2.5bn investment in fibre announced by BT management.[431]

Our response and assessment

9.22 In this section we explain why we consider that it is inappropriate to attribute access fibre (spine and distribution) depreciation and MCE between NGA and non-NGA using the Fibre GRC Methodology and we propose alternative attribution rules.

9.23 We also explain that we do not consider that it is inappropriate to attribute access fibre maintenance between NGA and non-NGA using the Fibre GRC Methodology.

9.24 We respond to Vodafone's points concerning i) BT's reclassification of some fibres used to provide FTTC from NGA spine fibre to NGA distribution fibre and ii) the level of the NGA fibre MCE.

9.25 This section is structured as follows:

- Whether it is inappropriate to apply the Fibre GRC Methodology to distribution fibre depreciation and MCE.
- Whether it is inappropriate to apply the Fibre GRC Methodology to spine fibre depreciation and MCE.
- Whether it is inappropriate to apply the Fibre GRC Methodology to access fibre maintenance costs.
- BT's reclassification of some fibres used to provide FTTC.
- Level of NGA fibre MCE.

Whether it is inappropriate to apply the Fibre GRC methodology to distribution fibre depreciation and MCE

9.26 In June we said that it appeared inappropriate to attribute depreciation and MCE between asset types (e.g. NGA and non-NGA) using the Fibre GRC Methodology because it does not take account of differences in asset lives.

9.27 Where asset lives differ and information on depreciation and asset costs is available by asset type, we consider that an objective methodology would use this information to attribute the depreciation and asset cost. An objective methodology would therefore reflect the fact that the depreciation and MCE associated with a particular asset type is a function of the asset life assumed for that asset type.

9.28 To illustrate this point, Table 9.2 demonstrates that the use of GRC to attribute total depreciation and MCE (i.e. the net replacement costs (NRC) of the asset) between two assets could skew the attribution where those assets have different lives.

[431] Vodafone, June Consultation response, page 16, paragraphs 4.18 to 4.21. Vodafone obtained the £2.5bn figure from BT's Q4 2009/10 analyst webcast: http://www.btplc.com/Sharesandperformance/downloads/PDFdownloads/q410transcript.pdf

Table 9.2: illustrative impact of different asset lives on attributions

Attribution rule	Asset A	Asset B	Total	Asset A %	Asset B %
Scenario 1: same asset lives					
Asset life (years)	10	10			
GRC	100	200	300	33%	67%
Annual depreciation	10	20	30	33%	67%
NRC (after 1 year)	90	180	270	33%	67%
Scenario 2: different asset lives					
Asset life (years)	20	10			
GRC	100	200	300	33%	67%
Annual depreciation	5	20	25	20%	80%
NRC (after 1 year)	95	180	275	35%	65%

9.29 In scenario 1, Asset A and Asset B have the same asset lives. The table shows that in this case attributing total depreciation between Asset A and Asset B using GRC would give the same result as if depreciation was used (a 33%/67% split). In scenario 2, Asset A has a longer asset life than Asset B. In this case, attributing total depreciation between Asset A and Asset B using GRC gives a different result to an attribution based on depreciation. The same argument would apply to the NRC asset costs.

9.30 BT has told us that the asset life assumed for distribution fibre differs between NGA and non-NGA:

- NGA Distribution Fibre has an asset life of 20 years
- Non-NGA Distribution Fibre has an asset life of 15 years.[432]

9.31 In order to attribute distribution fibre depreciation between NGA and non-NGA in a way that takes account of asset lives BT would need information on the gross and net book values of these assets and a method of reflecting the current cost (CCA) values. We consider that this information is available to BT.[433]

9.32 We therefore consider that it is inappropriate to apply the Fibre GRC Methodology to distribution fibre depreciation and MCE because it does not take account of the

[432]Response to Section 9 questions, 10 August 2015: BT said that it uses a shorter asset life for non-NGA distribution fibre because this fibre is linked directly to a customer premises and is therefore more likely to become obsolete when the customer switches.

[433] BT's 'life of plant list' (see page 281 of the 2013/14 DAM) has records of distribution fibre assets by NGA and non-NGA, gross book value, net book value and asset life. Although BT has told us that it does not currently estimate current cost values such as NRC for distribution fibre separately, we consider that BT could estimate these values by reference to the information it has on distribution fibre; namely the gross book values (GBV), net book values (NBV) and gross replacement costs (GRC). For example, the NBV/GBV ratio multiplied by the GRC would give an estimate of the NRC, response to Section 9 questions, 4 September 2015

difference in asset lives, and BT has sufficient information available to be able to take this into account.[434]

Proposal for attributing distribution fibre depreciation and MCE

9.33 In light of the above, we propose that BT should attribute the distribution fibre depreciation costs and MCE between NGA and non-NGA in a way which takes into account the difference in asset lives between NGA and non-NGA fibre assets.

9.34 For depreciation, the attribution of the in-year depreciation costs of distribution fibre to NGA and Non-NGA should be based on the relative in-year depreciation charges for NGA and non-NGA distribution fibre. For MCE the attribution of the distribution fibre MCE between NGA and non-NGA should be based on the relative NRC values.

Whether it is inappropriate to apply the Fibre GRC methodology to spine fibre depreciation and MCE

9.35 Spine fibre costs are currently split between NGA and non-NGA using the ratio of distribution fibre NGA/non NGA GRC because BT says it is unable to separately identify the NGA and non-NGA spine fibre cables.[435]

9.36 We note that spine fibre has an asset life of 20 years; BT does not use a different asset life for NGA and non-NGA spine fibre as it does for distribution fibre. If BT was able to separately identify NGA and non-NGA spine fibre cables, we consider that it would be appropriate to split total spine fibre costs between NGA and non-NGA on the basis of GRC. We would not expect the use of GRC to skew the attribution of depreciation and asset costs because NGA and non-NGA spine fibres have the same asset life (this is illustrated in Table 9.2).

9.37 However, given that BT says it is unable to separately identify NGA and non-NGA spine fibres, it currently uses the Fibre GRC Methodology to attribute spine fibre costs between NGA and non-NGA.[436]

9.38 BT said that its rationale for applying the distribution fibre NGA/non-NGA GRC ratio to spine fibre was that a signal passing through a distribution fibre must have first passed through a spine fibre, implying that the ratio of NGA to non-NGA traffic volume would be similar for spine and distribution fibre.[437] While we agree with BT's logic that it would be reasonable to expect the ratio of spine fibre NGA/non-NGA traffic volume to be similar to the ratio of distribution fibre NGA/non-NGA traffic volume, we do not consider that the distribution fibre GRC would appropriately reflect this because the mix of cable sizes between distribution fibre NGA and non-NGA is dissimilar.

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[434] Where the asset lives were relatively similar or the asset values were relatively small, the use of the Fibre GRC methodology may be a practical and proportionate approach. However, the volume of NGA distribution fibre is increasing and is likely to become more important in the future as BT rolls out its fibre network.

[435] BT response 4 September 2015

[436] We will continue to explore with BT whether it can identify NGA and non-NGA spine fibres. We have seen some information systems that appear to separately identify NGA and non-NGA spine fibres, such as BT's 'Integrated Network Systems' (INS); see page 280 of BT's 2013/14 DAM.

[437] BT response dated 17 September 2015

9.39 Table 9.3 shows the proportion of cable sizes (i.e. the number of individual fibres in each cable) used in distribution fibre. Almost all NGA distribution fibre cables contain 4 fibres while non-NGA distribution fibre cables are relatively larger (although the majority of non-NGA distribution fibre cables also contain 4 fibres).[438]

Table 9.3. Cable sizes used for distribution fibre, 2013/14

Cable size (no.of fibres)	Distribution – all	Distribution NGA	Distribution non-NGA
2	-	-	-
4	87%	100%	85%
12	10%	0%	12%
24	2%	0%	2%
48	1%	0%	1%
72	0%	0%	0%
96	0%	0%	0%
144	0%	-	0%
240	0%	-	0%
276	0%	-	0%
Total	100%	100%	100%

Source: BT Fibre Model 232 - CCA Fibre 13-14_p12_PART_E, 6 November 2014

9.40 The GRC for distribution fibre is estimated by applying a replacement cost price to different cable sizes. Since NGA distribution fibres are carried through relatively smaller cables than non-NGA distribution fibres, the impact of economies of scale[439] means that the cost per fibre for NGA distribution fibre is greater. As a result, the impact of attributing spine fibre costs between NGA and non-NGA using the distribution fibre GRC ratio is to attribute more cost to NGA than would be implied by the simple volume of distribution fibres that are associated with NGA. In 2013/14 for example, around 10% of distribution fibres were NGA fibres, but 13% of the distribution fibre GRC was associated with NGA due to the relative differences in cable sizes.

9.41 For this reason, we do not consider that cable size appropriately represents the amount of NGA and non-NGA distribution traffic and we therefore consider that it is inappropriate to attribute spine fibre costs using the Fibre GRC Methodology.

Proposal for attributing spine fibre depreciation and MCE

9.42 If BT was able to separately identify NGA and non-NGA spine fibre cables, we consider that it should use this information to split total spine fibre costs between NGA and non-NGA in a similar way to our proposals for distribution fibre.

9.43 However, since BT has told us that it is unable to identify NGA and non-NGA fibres in the spine network, we propose to attribute spine fibre costs between NGA and non-NGA using the volume of distribution fibre NGA and non-NGA fibres. We consider that using the volumes of fibres would reflect the fact that the ratio of spine fibre

[438] From Fibre model 232 - CCA Fibre 13-14_p12_PART_E, 6 November 2014
[439] For example, the price of replacing a 12-fibre cable is less than three times the cost of replacing a 4-fibre cable, BT Fibre Model 232 - CCA Fibre 13-14_p12_PART_E, 6 November 2014.

NGA/non-NGA traffic volume would be similar to the ratio of distribution fibre NGA/non-NGA traffic volume.

9.44 In 2013/14 this methodology would indicate that 10% of spine fibre costs were associated with NGA, compared to 13% using the Fibre GRC methodology. While this percentage difference was not large in 2013/14, BT's ongoing investment in NGA means that this difference has the potential to be more marked in future.[440]

Whether it is inappropriate to apply the Fibre GRC methodology to access fibre maintenance costs

9.45 In June we considered that maintenance costs could be higher for older access fibre than newer access fibre. If this was the case we considered that the Fibre GRC methodology could be inappropriate because it would not reflect the age of the fibre when attributing fibre maintenance costs.

9.46 However, we understand that, unlike copper, the level of fibre maintenance is not necessarily linked to the age of the fibre. This is because fibre is less sensitive to age and atmospheric factors than copper. While fibre can be sensitive to manual intervention or environmental impacts[441] we have not been able to identify an activity or characteristic of fibre that is associated with the amount of maintenance required.

9.47 The Fibre GRC Methodology attributes access fibre maintenance costs between NGA and non-NGA based on the relative proportions of GRC. In the absence of a specific activity or characteristic of fibre that could be used to attribute maintenance costs between NGA and non-NGA, we do not consider that an attribution rule using GRC is necessarily inappropriate, although as explained in paragraphs 9.36 in relation to spine fibre, attributing maintenance using GRC places more weight on the cable size mix than the volume of fibres.[442] In conclusion, we do consider that it is inappropriate to apply the Fibre GRC Methodology to fibre maintenance costs.

BT's reclassification of some fibres used to provide FTTC

9.48 In 2013/14 BT reclassified some fibre cables used to provide FTTC from NGA spine fibre to NGA distribution fibre. This resulted in a large reduction in spine fibre volumes and a corresponding increase in distribution fibre volumes.[443]

9.49 Vodafone questioned this reclassification because it considered that FTTC fibre was defined as a fibre running from the local exchange to the cabinet and that this definition corresponds to the definition of NGA spine fibre, which also runs from the exchange to the cabinet.

9.50 As illustrated in Figure 9.1, spine fibre cables run between the exchange and the fibre aggregation node[444] while distribution fibres run from the aggregation node

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[440] Changes to the distribution fibre cable-size mix would also affect this difference.
[441] Manual intervention includes damage from road works or utility works and environmental impacts include flooding and subsistence.
[442] We also note that the amount of access fibre maintenance costs in 2013/14 was [✄ £0m to £10m]. This is a relatively small amount and an alternative attribution rule would not necessarily have a significant impact on the amount of fibre maintenance costs attributed to regulated markets
[443] BT response dated 10 August 2015

towards a residential or business premise. An FTTC fibre would include a spine fibre from the exchange to the aggregation node and then a distribution fibre from the aggregation node to the NGA cabinet, which contains the DSLAM.[445] The particular cables that that BT reclassified were those that sit between the aggregation node and the NGA cabinet (these fibres are highlighted in orange in Figure 9.1). We consider that BT's reclassification is consistent with the definition of distribution fibre.

Level of NGA fibre MCE

9.51 Vodafone said that it is hard to reconcile the implied £115m NGA valuation (even after adding cost of equipment) with the £2.5bn investment in Fibre announced by BT management. We agree with Vodafone that understanding what is included in the £2.5bn investment announced by BT can help assess whether the amount of NGA fibre recorded in the RFS is reasonable.

9.52 We note that the £115m NGA figure referred to by Vodafone is an NRC figure, which includes cumulative depreciation. The corresponding GRC amount is [✂ £0m to £500m], which represents the amount BT has spent on NGA fibre, amended to reflect the current purchase price.

9.53 We asked BT to explain what was included in the £2.5bn of fibre spend announced by BT in 2010. BT said that this amount is broadly made up of; [✂] of Openreach capital expenditure, [✂] of Openreach expensed operating costs and [✂] of investment committed prior to BT's public announcement of 40% homes and [✂] of Other LOB capital expenditure.

9.54 The [✂] of Openreach capital expenditure includes expenditure on a number of different assets such as access fibre, duct, cabinets, electronics and systems development. BT has not yet provided a breakdown of this NGA capital expenditure in Openreach. We will request this breakdown and review in time for the statement whether or not the Fibre GRC included in the RFS is a reasonable representation of the total NGA fibre spend, included in the £2.5bn.[446]

9.55 We consider that our proposed attribution rules will help ensure that the fibre costs attributed to NGA in the Regulatory Financial Statements better represent the amount invested by BT since they take greater account of the information on NGA spend included in BT's accounting system.

Summary of proposals for Fibre GRC

9.56 In conclusion, we propose that BT should:

- attribute distribution fibre depreciation costs and MCE between NGA and non-NGA in a manner which takes into account the difference in asset lives between NGA and non-NGA distribution fibre; and

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[444] In the June Consultation we did not define spine or distribution fibre by reference to a cabinet. Instead we defined these terms by reference a distribution point, distribution node or aggregation node (which are interchangeable terms).

[445] BT response dated 10 August 2015

[446] BT response dated 9 November 2015

- attribute spine fibre depreciation costs and MCE between NGA and non-NGA using the relative volume of distribution fibre NGA and non-NGA fibres.

Impact of our proposals

9.57 Table 9.4 shows the percentages that would be applied to spine and distribution fibre to attribute depreciation and MCE between NGA and non-NGA compared to the existing attributions.

Table 9.4: Current and proposed attributions of spine and distribution fibre

		CCA operating costs		MCE	
		Current	Proposed	Current	Proposed
Spine	NGA	13%	16%	13%	16%
	Non NGA	87%	84%	87%	84%
Distribution	NGA	13%	10%	13%	22%
	Non NGA	87%	90%	87%	78%

9.58 BT estimates that the impact of our proposals would be to increase operational costs (depreciation) by £0.1m in regulated markets and reduce MCE by £68.2m, as shown in Table 9.5.[447] Almost all of the MCE impact relates to business connectivity markets.

Table 9.5: Impact of amending the Fibre GRC methodology

	Fixed access	Business connectivity	Narrow-band	WBA 1 and 2	Wholesale residual	Retail Residual
CCA operating cost	0.2	(0.1)	0.0	0.0	(0.1)	0.0
Mean Capital Employed	(4.2)	(68.2)	(0.1)	0.0	72.5	0.0

Question 9.1: Do you agree that is it inappropriate to apply the Fibre GRC Methodology to distribution and spine fibre when attributing costs between NGA and non-NGA? If so, do you agree with our proposals?

[447] These figures include the impact of applying the proposed attribution percentages to both access fibre and, where relevant, access duct.

Section 10

Transfer charges

Introduction

10.1 Transfer charges are internal trades between BT divisions.[448] There are two elements of transfer charges: a 'transfer out' from one part of BT and a corresponding 'transfer in' to another part of BT.[449]

10.2 In BT's cost attribution system, transfer charges are either balanced or unbalanced. The effect of unbalanced transfers on the cost attribution system is to add an additional [✄] to operational costs in regulated markets.

10.3 In this section we explain why we do not consider that the inclusion in the cost attribution system of balanced transfer charges is inappropriate since the transfers in and out net to zero and they are attributed in the same way.

10.4 We also explain why we do not consider that the inclusion in the cost attribution system of unbalanced transfer charges is inappropriate. While some of these unbalanced transfers are calculated by reference to an external price, we consider that it is difficult to calculate the underlying cost of an internally-provided service and that even if this was possible, the impact of doing so on regulated markets is likely to be small.

10.5 Finally, we note that BT has improved the description of transfer charges in its 2015 Accounting Methodology Documents.

Background

10.6 Balanced transfers net-off within BT's cost attribution system and make no contribution to the total costs. Some balanced transfer charges are also used to help attribute costs, such as Property and Motor transport costs.

10.7 Unbalanced transfers do not net-off within BT's cost attribution system. These unbalanced transfers usually arise because BT's cost attribution system does not include costs recorded in BT's 'non-core' subsidiaries.[450] Therefore, BT's cost attribution system only records either the transfer out to non-core subsidiaries or the transfer in from non-core subsidiaries. Unbalanced transfers contribute to the total costs recorded in BT's cost attribution system.

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[448] BT, Accounting Methodology Document 2015, Section 15

[449] For example, where Openreach occupies a building held in Group property there may be a transfer out from Group Property (shown as a credit in Group Property) and a corresponding transfer into Openreach (shown as a debit in Openreach).

[450] These non-core subsidiaries are usually associated with BT's overseas operations.

10.8 Unbalanced transfers in are included in the cost attribution system since BT assumes that they represent an appropriate estimate of the relevant costs that are incurred when a non-core BT subsidiary provides services to BT Group.[451]

10.9 In the Regulatory Financial Statements 2013/14 unbalanced transfer charges contributed a net [✂] of operating costs to regulated markets. As we explained in June, £13m of that is now reattributed to residual markets following the correction of an error.[452]

What we said in June

10.10 We identified concerns about balanced and unbalanced transfer charges.

Balanced transfer charges

10.11 We explained in June that the benefits of including balanced transfers within BT's cost attribution system were unclear and there may be some disadvantages, such as:

- They increase the size of the system and make it more complex.
- They introduce the potential for errors if transfers do not net off to zero.
- They introduce the potential for bias if transfers in are attributed in a different way to the corresponding transfers out.

10.12 We said that we would work with BT to better understand its balanced transfer charges in order to establish whether it is appropriate to include balanced transfers within BTs cost attribution system.

Unbalanced transfer charges

10.13 In order to better understand unbalanced transfers we said that BT's documentation could be improved[453] and the definition of core and non-core units should be clarified.[454]

10.14 We also said that we were concerned that some unbalanced transfers included a mark-up on costs where the internal transfer was calculated by reference to an externally charged price.[455] For example, BT calculates the cost of its employee broadband offer by reference to the retail broadband price rather than the underlying cost of provision.[456]

10.15 Finally, we noted that Cartesian had a concern that "the costs attributed to AG106 appear incomplete. A [✂ £10m to £50m] FAC transfer charge is attributed by BT

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[451] BT, Accounting Methodology Documents, Section 5 page 270
[452] June Consultation, page 39, paragraphs 7.33 to 7.37
[453] June Consultation, page 89, paragraph 9.87
[454] June Consultation, page 89, paragraph 9.88
[455] June Consultation, page 88, paragraph 9.82
[456] BT response dated 29 October 2015

Property into AG106. However, no transfer charge out can be identified to be attributed from the data provided by BT."[457]

10.16 We said we would work with BT to better understand its transfer charges before concluding on whether any aspect of unbalanced transfer charges was inappropriate.

Stakeholder responses

Balanced transfer charges

10.17 Vodafone agreed with Ofcom that "balanced transfers which make no net contribution to BT's total costs introduce complexity and reduce transparency for no obvious benefit".[458]

Unbalanced transfer charges

10.18 Where unbalanced transfer charges were calculated by reference to an externally charged price, Vodafone were concerned that BT was able to recover the 'mark-up' twice, "once in the transfer charge and again via a return in a charge control" and that it "may give BT an inappropriate incentive to designate as many activities and assets as it can as "non-core", just to boost its total returns."[459]

10.19 TalkTalk said that they wanted to understand more about non-core subsidiaries and what services they provide. TalkTalk argued that the cost of the employee broadband offer should be based on the underlying cost and not the retail price.[460]

10.20 In relation to the employee broadband offer EY said that it considered that the current treatment of calculating the transfer charge using the externally charged price was consistent with standard accounting practice. However, EY said that for the purposes of regulatory accounting it considered that it may be legitimate to question the inclusion of margin within this calculation. EY considered that the costs and tax (including tax on margin) could appropriately be included within the costs of this offer for regulatory purposes. However, it also said that there was a case for deducting post-tax margin from the cost, as this was caused by BTs profit rather than cost and therefore presents a challenge to the causality principle.[461]

Our response and assessment

Whether it is inappropriate to include balanced transfers in the cost attribution system

10.21 We consider that the inclusion of balanced transfers in the cost attribution system could be inappropriate if the transfers in and out did not net to zero or if they were attributed in different ways.

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[457] June Consultation, page 87, paragraph 9.76
[458] Vodafone, June Consultation response, page 15
[459] Vodafone, June Consultation response, page 15, paragraph 410
[460] TalkTalk, June Consultation response, page 19, paragraph 385
[461] BT, Annex E EY Report page 30

10.22 Where a transfer in has a corresponding transfer out, BT's cost attribution system recognises this by using a general attribution rule, 'Rule Type 28', that attributes the transfer charge receipts (transfers in) in proportion to the transfer charge payments (transfers out).[462] BT has provided evidence that these transfer charges net to zero at a market level.[463]

10.23 For balanced transfers, it therefore appears that the transfers in and out do net to zero and they are attributed in the same way throughout the cost attribution system. While we consider that the inclusion of transfer charges in the cost attribution system increases the size and complexity of the cost attribution system, we do not consider that their inclusion in the cost attribution system is inappropriate.

10.24 Since the June Consultation BT has improved the documentation on transfer charges in its 2014/15 Accounting Methodology Documents.[464] The 2014/15 Accounting Methodology Documents also set out that some balanced transfers are used to attribute actual costs, notably property, electricity and motor transport costs.[465] We have reviewed the use of internal transfers for the purpose of attributing vacant property space and electricity in Section 5.[466]

Whether it is inappropriate to include unbalanced transfers in the cost attribution system

10.25 In this section we first explain the changes that BT has made to its documentation of unbalanced transfer charges and clarify the definition of non-core units which account for some of the unbalanced transfers.

10.26 We then consider whether it is inappropriate to include unbalanced transfers in the cost attribution system. We consider that the inclusion of unbalanced transfers in the cost attribution system could be inappropriate if they were based on external prices that did not represent a reasonable estimate of the cost to BT or if they were incomplete.

Documentation

10.27 While BT's accounting documentation included some explanation of transfer charges, we said in June that it did not sufficiently explain unbalanced transfer charges.

10.28 BT has addressed this concern by including a section on transfer charges in its 2014/15 Accounting Methodology Documents.[467] The 2014/15 Accounting Methodology Documents state that unbalanced transfer charges are included in the cost attribution system for two reasons:[468]

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[462] BT, Accounting Methodology Document 2015, page 19
[463] BT response, dated 15 October 2015
[464] BT, Accounting Methodology Document 2015, pages 19-21 and Section 15, pages 269 to 272
[465] BT, Accounting Methodology Document 2015, section 5.4, page 20
[466] Where we propose alternative attribution rules for vacant property space, BT may implement this via a change to internal transfer charging mechanisms (which are subsequently used to attribute actual costs), but this would not affect the fact that these transfer charges would balance in BT's cost attribution system.
[467] BT, Accounting Methodology Document 2015, Section 15
[468] BT, Accounting Methodology Document 2015, page 270

- “The charge [received] is from a non-core unit. In these cases REFINE does not have a detailed view of the underlying costs in the charging unit but we believe that the transfer-in represents an appropriate estimate of the relevant costs e.g. BT Group insurance premiums.”

- “The charge relates to an externally available service provided for internal use in which case the charges are shown at standard prices. In these cases, we consider the prices to be an appropriate estimate of the costs e.g. the provision of BT Conferencing services.”

10.29 BT’s documentation now explains how unbalanced transfers arise and provides details of the more material unbalanced transfers[469]. We consider that the explanation of transfer charges given by BT in the 2014/15 Accounting Methodology Document is a significant improvement. We welcome stakeholder comments as to whether BT’s explanation is sufficient.

Core and non-core units

10.30 This section provides more detail on the difference between core and non-core units. BT explains in its 2014/15 Accounting Methodology Documents that non-core units can give rise to unbalanced transfers in BT’s cost attribution system. BT assumes that the transfers in from non-core units are a proxy for the underlying cost incurred in those non-core units.

10.31 BT’s 2014/15 Accounting Methodology Documents say that BT’s cost attribution system includes all costs for units that use the core general ledger.[470]

10.32 The Accounting Methodology Documents also say that the cost attribution system includes costs from BT’s ‘self-accounting business units’ which are typically BT-owned subsidiaries. These are ‘non-core’ units because they do not use the core general ledger. The Accounting Methodology Documents say that costs from these non-core units are “included in REFINE in order to reconcile the financial information to that published in [BT’s] statutory accounts but are allocated to the Retail Residual market”.[471]

10.33 However, any transfer charges between core and non-core units will be recorded in the core general ledger and are therefore included in the cost attribution system against the line of business to which they relate. The transfer charges associated with non-core units are unbalanced in the cost attribution system because while the balancing transfers do exist within BT Group as a whole, they are not included in the cost attribution system.

10.34 BT’s non-core units sometimes provide services to BT’s core units, such as conferencing facilities, internal intranet and offshore finance. Non-core units include subsidiaries such as Plusnet, BT Group Insurance and Risk Financing, BT Centre,

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[469] Unbalanced transfers in greater than £1m that are included in regulated markets are explained on page 271 of BT’s Accounting Methodology Document 2015.
[470] BT, Accounting Methodology Document 2015, page 16
[471] BT, Accounting Methodology Document 2015, page 16

BT Conferencing, and BT IT Services.[472] BT has also confirmed that some parts of BT's Global Services division are non-core self-accounting units, such BT Americas or BT Global Services Solutions.[473]

10.35 Where non-core units provide services to core units, these will be accounted for via transfer charges. This type of arrangement, with multiple subsidiaries and associates, is quite common for large multi-national companies.

Transfers based on external prices

10.36 As set out above, some unbalanced transfer charges are calculated by reference to an externally charged price and may therefore include a mark-up on costs.

10.37 BT has told us that in 2013/14 there were 29 unbalanced transfer charges included in the cost attribution system which had a value greater than £1m.[474] Of these, five represented transfers associated with purchasing services from other parts of BT that were calculated by reference to an external price and attributed in part or whole to regulated services.[475] These five transfers are shown in Table 10.1.

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[472] A list of BT's largest subsidiaries is included on page 199 of BT's 2015 annual report. However, not all of these subsidiaries will necessarily be a non-core unit. Also, page 271 of BT's Accounting Methodology Document 2015 includes examples of some non-core units.
[473] BT, Response to section 9 questions, 15 October 2015
[474] BT response dated 29 October 2015
[475] The remaining unbalanced transfer charges are comprised of pay costs or other operating costs only and are not calculated by reference to an external price.

Table 10.1: Unbalanced transfer charges calculated by reference to external prices and attributed to regulated services, 2013/14, £m

F8 Code	Description	BT Subsidiary	Total value £m	Value in regulated markets £m
244648	This is a trade from BT Retail to BT Group at external prices for the discounted broadband lines which employees are entitled to receive.	British Telecommunications plc (BT Consumer)	[✂] £10m to £50m	[✂] £0m to £10m
24777A	This is a charge from a non-core unit (BT Conferencing) for the internal use of conferencing services. Each unit receives a charge for the services consumed.	British Telecommunications plc (BT Global Services)	[✂] £10m to £50m	[✂] £0m to £10m
244772	This represents a charge from a non-core subsidiary of BT Group (BT IT Services Ltd) to BT TSO for IT hardware and services that are used in the services that BT TSO provides for the lines of business. This is a cost recovery charge based on the actual cost of equipment purchased and services provided.	BT IT Services Limited	[✂] £10m to £50m	[✂] £0m to £10m
247721	This is a charge from a non-core unit within BT Global Services to BT Group for the internal use of their products at external prices. These services are used for BT's internal infrastructure e.g. its' Intranet. This charge is based on circuit prices but also includes additional BT Global Services management costs.	British Telecommunications plc (BT Global Services)	[✂] £10m to £50m	[✂] £0m to £10m
248A46	This charge relates to management consultancy fees charged from a BT owned subsidiary. This charge is based on consultancy fees.	Moorhouse Consulting Ltd.	[✂] £0m to £10m	[✂] £0m to £10m
Total			[✂] £50m to £100m	[✂] £10m to £50m

10.38 We agree with Vodafone and TalkTalk that where one part of BT supplies a service to another part of BT that it also supplies externally, the cost to BT is the underlying cost of the service, which may not be the same as the externally charged price. While the external price would represent the cost to BT where it actually purchased the service from another supplier, the cost to BT is likely to be less than this when it supplies itself since, for example, it may include a mark-up on costs.

10.39 However, we consider that estimating the underlying cost to BT of an internally-provided service is not straightforward. For example, in the case of the employee broadband offer the underlying cost is likely to include a wholesale cost (which may be set by a charge control) and the retail costs of providing and administering the service. EY argues that tax could also represent a relevant cost.

10.40 Given this difficulty, we have therefore considered whether calculating the transfer by reference to an external price, which may include some retail margin, is likely to materially overstate the cost to BT of providing the service for the purposes of cost attribution. For this purpose we have considered the margin of the retail residual market reported in the Regulatory Financial Statements. However, we note that this margin would not necessarily equate to that incorporated into the prices of the transfers included in Table 10.1.

10.41 Over the last three years, the margin[476] associated with the retail residual market has broadly varied between 5 and 10%.[477] Assuming that the external prices used to calculate the transfers in Table 10.1 include the same retail margin, then approximately £1-3m of the transfer cost included in regulated markets could represent a margin. In any one particular regulated market, this means that the impact is likely to be less than £1m. On this basis, we do not consider that calculating the transfers in Table 10.1 using external prices is likely to materially overstate the cost to BT of internally providing the relevant service.

10.42 Therefore, given the difficulties in calculating the underlying cost of an internally-provided service, and the fact that the impact on regulated markets is likely to be small, we do not consider that calculating certain unbalanced transfers by reference to an external price for cost attribution purposes is inappropriate.[478] However, BT should clearly set out in its accounting documentation the unbalanced transfers that are based on external prices.

10.43 Vodafone also raised a concern that if an unbalanced transfer charge from a non-core unit included a mark-up then this “may give BT an inappropriate incentive to designate as many activities and assets as it can as “non-core”, just to boost its total returns”.[479]

10.44 We consider that there is a relatively small risk that BT would make significant changes to its corporate structure in order to benefit from charging internally for products at external prices within its regulatory accounts. However, any changes of this nature that BT does propose will be reported as part of the annual Change Control process. Our 2014 Regulatory Reporting Statement said that BT needs to include in its Change Control Notification any proposed change to the Regulatory Accounting Methodology, with the Regulatory Accounting Methodology being defined so as capture the “rules, policies, methods, allocations, calculations, assumptions and procedures used by BT for the purpose of preparing Regulatory Financial Statements”.[480]

Completeness

10.45 In June we noted Cartesian’s concern that an unbalanced transfer in from BT Property was included in AG106. Cartesian considered that this should be netted off in AG106 by a corresponding transfer out. However, this concern was misplaced because this particular transfer charge is an unbalanced transfer charge from the BT

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[476] Return divided by total revenue.
[477] Derived from the revenue and return figures reported by BT in the ‘Performance summary by market’ schedule in the Regulatory Financial Statements.
[478] Where transfer charges are based on the external price and are included in the cost base of regulated services, then a charge control may wish to consider whether any adjustment is required for the purposes of setting prices.
[479] Vodafone, June Consultation response, page 15, paragraph 4.10
[480] Regulatory Financial Reporting statement, May 2014, paragraph 3.138

Centre subsidiary (a non-core unit that contains the costs associated with BT Centre in London).[481] We do not consider that this transfer charge represents a completeness concern and we have not identified any other completeness concerns associated with the inclusion of unbalanced transfer charges in the cost attribution system.

Conclusion

10.46 Having considered stakeholders' responses and evidence provided by BT we do not consider that the inclusion of unbalanced transfer charges in BT's cost attribution system is inappropriate.

Question 10.1: Do you agree with our assessment of balanced transfer charges? If you disagree, please explain why.

Question 10.2: Do you agree with our assessment of unbalanced transfer charges based on external prices? If you disagree, please explain why and suggest a methodology to estimate the underlying costs to BT of internally providing services.

Question 10.3: Do you have any comments on BT's description of transfer charges in its 2015 Accounting Methodology Documents?

[481] See for example the entry for F8 code 248885 on page 271 of BT's 2014/15 Accounting Methodology Documents.

Section 11

Implementation of proposed changes

Introduction

11.1 This section provides an update about how decisions for changes to BT's cost attribution methodologies will be implemented and how changes to cost attribution methodologies will be reflected in the LLCC decision.

Impact on BT's Regulatory Financial Reporting

11.2 In June we explained how decisions about BT's cost attribution methodologies will be reflected in BT's Regulatory Financial Reporting. This includes BT's Regulatory Financial Statements and Accounting Methodology Documents.[482]

Impact of our review on our regulatory proposals and decisions in the LLCC

LLCC cost modelling

11.3 In June, we said that it is important to consider issues concerning BT's cost attribution methodologies as part of our market review process. Reporting requirements must follow and reflect our regulatory decisions.

11.4 Our June Consultation was published alongside the June LLCC Consultation. We explained that our review had an immediate impact on the cost modelling for the June LLCC Consultation as follows:

- we proposed to adjust the base year costs to reflect the proposed changes to the way that BT attributes certain General Overheads (i.e. those costs included in AG103 and AG112); and
- we also said that base year costs taken into account for the purpose of the 2016 LLCC Statement would reflect the errors corrected by BT in the 2014/15 Regulatory Financial Statements.

11.5 In this consultation we have reviewed and revised some of our June proposals in relation to the way BT attributes certain General Overheads[483]. We have also made new proposals for changes to the way that BT attributes (i) Openreach overheads (COMCOS), (ii) BT Wholesale general software (AG409), (iii) Openreach general software (AG410), (iv) Openreach and TSO Software, (v) Property, (vi) Power, (vii) Proceeds from sales of copper and property, (viii) Duct and (ix) Fibre. For each of these proposals, with the exception of the proposals relating to the attribution of proceeds from sales of copper and property, we have set out estimated impacts on the 2013/14 base year costs.

[482] Review of BT's cost attribution methodologies. June 2015. Section 13, page 138-139
[483] AG112 (Corporate overheads) and AG103 (TSO Support functions)

11.6 In the LLCC November consultation published alongside this consultation we have adjusted the base year costs in the November 2015 LLCC Base Year Model to reflect the cost attribution review proposals set out in this consultation with the exception of the proposed changes to the attribution of proceeds from sales of copper and property. In particular, in the November 2015 Base Year Model we have apportioned the estimated market impacts of the proposals set out in this consultation across components and services based on the same proportions within BT's unadjusted 2013/14 base year data.

11.7 Our proposals are subject to consultation. Decisions made as part of this review of BT's cost attribution methodologies will be reflected in the 2016 BCMR and LLCC Statement if they have an impact on the wholesale leased lines market.

Consistency with the 2016 BCMR and LLCC Statement

11.8 In the June 2015 BCMR Consultation we proposed to impose cost accounting and accounting separation requirements on BT in each of the wholesale leased lines markets in which we propose BT has SMP. In doing so, we proposed to impose the regulatory accounting SMP conditions which implement the changes to BT's regulatory financial reporting requirements introduced in the Regulatory Financial Reporting Decision. We concluded in May 2014 that these changes should be applied to BT across all regulated markets.

11.9 The proposed SMP conditions for the wholesale leased lines markets include among others the requirement on BT to ensure that the Regulatory Financial Statements are in accordance with the Regulatory Accounting Guidelines and the Regulatory Accounting Principles, including the Principle of Consistency with Regulatory Decisions.

11.10 Annex 15 of the June 2015 LLCC Consultation included a proposed consistency direction which specified how BT should correct the errors we found and reflect the changes to cost attribution methodologies that we proposed.

11.11 The November 2015 LLCC Consultation includes in Annex 6 an updated consistency direction that reflects our revised proposals in relation to BT's cost attribution methodologies set out in this consultation.

11.12 If we decide to adopt the proposed requirements and any other requirements which reflect the adjustments which we ultimately decide to make in the 2016 BCMR and LLCC Statement, such requirements will become part of the Regulatory Accounting Guidelines.

Annex 1

Responding to this consultation

How to respond

A1.1 Ofcom invites written views and comments on the issues raised in this document, to be made **by 5pm on 14 December 2015**.

A1.2 Ofcom strongly prefers to receive responses using the online web form http://stakeholders.ofcom.org.uk/consultations/BT-cost-attribution-review-second-consultation/howtorespond/, as this helps us to process the responses quickly and efficiently. We would also be grateful if you could assist us by completing a response cover sheet (see Annex 3), to indicate whether or not there are confidentiality issues. This response coversheet is incorporated into the online web form questionnaire.

A1.3 For larger consultation responses - particularly those with supporting charts, tables or other data - please email hannah.timberlake@ofcom.org.uk attaching your response in Microsoft Word format, together with a consultation response coversheet.

A1.4 Responses may alternatively be posted or faxed to the address below, marked with the title of the consultation.

Hannah Timberlake
Riverside House
2A Southwark Bridge Road
London SE1 9HA

Fax: 020 7981 4103

A1.5 Note that we do not need a hard copy in addition to an electronic version. Ofcom will acknowledge receipt of responses if they are submitted using the online web form but not otherwise.

A1.6 It would be helpful if your response could include direct answers to the questions asked in this document, which are listed together at Annex 4. It would also help if you can explain why you hold your views and how Ofcom's proposals would impact on you.

Further information

A1.7 If you want to discuss the issues and questions raised in this consultation, or need advice on the appropriate form of response, please contact Hannah Timberlake on 020 7783 4697.

Confidentiality

A1.8 We believe it is important for everyone interested in an issue to see the views expressed by consultation respondents. We will therefore usually publish all responses on our website, www.ofcom.org.uk, ideally on receipt. If you think your response should be kept confidential, can you please specify what part or whether all of your response should be kept confidential, and specify why. Please also place such parts in a separate annex.

A1.9 If someone asks us to keep part or all of a response confidential, we will treat this request seriously and will try to respect this. But sometimes we will need to publish all responses, including those that are marked as confidential, in order to meet legal obligations.

A1.10 Please also note that copyright and all other intellectual property in responses will be assumed to be licensed to Ofcom to use. Ofcom's approach on intellectual property rights is explained further on its website at http://www.ofcom.org.uk/terms-of-use/

Next steps

A1.11 Following the end of the consultation period, Ofcom intends to publish a statement in spring 2016.

A1.12 Please note that you can register to receive free mail Updates alerting you to the publications of relevant Ofcom documents. For more details please see: http://www.ofcom.org.uk/email-updates/

Ofcom's consultation processes

A1.13 Ofcom seeks to ensure that responding to a consultation is easy as possible. For more information please see our consultation principles in Annex 2.

A1.14 If you have any comments or suggestions on how Ofcom conducts its consultations, please call our consultation helpdesk on 020 7981 3003 or e-mail us at consult@ofcom.org.uk . We would particularly welcome thoughts on how Ofcom could more effectively seek the views of those groups or individuals, such as small businesses or particular types of residential consumers, who are less likely to give their opinions through a formal consultation.

A1.15 If you would like to discuss these issues or Ofcom's consultation processes more generally you can alternatively contact Graham Howell, Secretary to the Corporation, who is Ofcom's consultation champion:

Graham Howell
Ofcom
Riverside House
2a Southwark Bridge Road
London SE1 9HA

Tel: 020 7981 3601

Email: Graham.Howell@ofcom.org.uk

Annex 2

Ofcom's consultation principles

A2.1 Ofcom has published the following seven principles that it will follow for each public written consultation:

Before the consultation

A2.2 Where possible, we will hold informal talks with people and organisations before announcing a big consultation to find out whether we are thinking in the right direction. If we do not have enough time to do this, we will hold an open meeting to explain our proposals shortly after announcing the consultation.

During the consultation

A2.3 We will be clear about who we are consulting, why, on what questions and for how long.

A2.4 We will make the consultation document as short and simple as possible with a summary of no more than two pages. We will try to make it as easy as possible to give us a written response. If the consultation is complicated, we may provide a shortened Plain English Guide for smaller organisations or individuals who would otherwise not be able to spare the time to share their views.

A2.5 We will consult for up to 10 weeks depending on the potential impact of our proposals.

A2.6 A person within Ofcom will be in charge of making sure we follow our own guidelines and reach out to the largest number of people and organisations interested in the outcome of our decisions. Ofcom's 'Consultation Champion' will also be the main person to contact with views on the way we run our consultations.

A2.7 If we are not able to follow one of these principles, we will explain why.

After the consultation

A2.8 We think it is important for everyone interested in an issue to see the views of others during a consultation. We would usually publish all the responses we have received on our website. In our statement, we will give reasons for our decisions and will give an account of how the views of those concerned helped shape those decisions.

Annex 3

Consultation response cover sheet

A3.1 In the interests of transparency and good regulatory practice, we will publish all consultation responses in full on our website, www.ofcom.org.uk.

A3.2 We have produced a coversheet for responses (see below) and would be very grateful if you could send one with your response (this is incorporated into the online web form if you respond in this way). This will speed up our processing of responses, and help to maintain confidentiality where appropriate.

A3.3 The quality of consultation can be enhanced by publishing responses before the consultation period closes. In particular, this can help those individuals and organisations with limited resources or familiarity with the issues to respond in a more informed way. Therefore Ofcom would encourage respondents to complete their coversheet in a way that allows Ofcom to publish their responses upon receipt, rather than waiting until the consultation period has ended.

A3.4 We strongly prefer to receive responses via the online web form which incorporates the coversheet. If you are responding via email, post or fax you can download an electronic copy of this coversheet in Word or RTF format from the 'Consultations' section of our website at http://stakeholders.ofcom.org.uk/consultations/consultation-response-coversheet/.

A3.5 Please put any parts of your response you consider should be kept confidential in a separate annex to your response and include your reasons why this part of your response should not be published. This can include information such as your personal background and experience. If you want your name, address, other contact details, or job title to remain confidential, please provide them in your cover sheet only, so that we don't have to edit your response.

Cover sheet for response to an Ofcom consultation

BASIC DETAILS

Consultation title:

To (Ofcom contact):

Name of respondent:

Representing (self or organisation/s):

Address (if not received by email):

CONFIDENTIALITY

Please tick below what part of your response you consider is confidential, giving your reasons why

Nothing	☐	Name/contact details/job title	☐
Whole response	☐	Organisation	☐
Part of the response	☐	If there is no separate annex, which parts?	

If you want part of your response, your name or your organisation not to be published, can Ofcom still publish a reference to the contents of your response (including, for any confidential parts, a general summary that does not disclose the specific information or enable you to be identified)?

DECLARATION

I confirm that the correspondence supplied with this cover sheet is a formal consultation response that Ofcom can publish. However, in supplying this response, I understand that Ofcom may need to publish all responses, including those which are marked as confidential, in order to meet legal obligations. If I have sent my response by email, Ofcom can disregard any standard e-mail text about not disclosing email contents and attachments.

Ofcom seeks to publish responses on receipt. If your response is non-confidential (in whole or in part), and you would prefer us to publish your response only once the consultation has ended, please tick here. ☐

Name　　　　　　　　　　Signed (if hard copy)

Annex 4

Consultation questions

A4.1 Questions requiring responses by 5pm on 14 December 2015.

Question 4.1: Do you agree with our assessment that the Pay and ROA methodology is inappropriate? Please provide your reasons.

Question 4.2: Do you agree with our proposed definition of PAC to apply to costs which have no causality? Specifically, do you agree with our proposal to include capital expenditure in our definition, rather than an alternative measure of capital cost such as depreciation or ROA?

Question 4.3: Where we have identified causality for costs currently attributed using the Pay and ROA methodology, do you agree that i) causality can be identified with these costs and ii) our proposed attribution rule is appropriate?

Question 5.1: Do you agree with our assessment that property costs should be separately attributed from electricity costs?

Question 5.2: Do you agree with our assessments that the attribution of vacant space under the Anchor Tenant methodology and the mark-up of LLU hostel area space are inappropriate? Please provide your reasons.

Question 5.3: Do you agree with our assessments of the attributions of electricity costs including our assessments of BT's proposed error corrections and its proposed attributions? Please provide your reasons.

Question 5.4: Do you agree that our proposals for the attribution of property and electricity costs?

Question 6.1: Do you agree that the current attributions of Sales of Copper, Sales of Property and costs of Openreach Copper Recovery Team are inappropriate? Please provide your reasons.

Question 6.2: Do you agree with our proposals for the attribution of Sales of Copper, Sales of Property and the cost of the Openreach Copper recovery team?

Question 7.1: Do you agree that the Duct Valuation Methodology is inappropriate and, if so, do you agree with our proposal that it should be amended to take into account circuit length?

Question 8.1: Do you agree that the attribution of software costs in Openreach and TSO is inappropriate? If so, do you agree with our proposals?

Question 9.1: Do you agree that is it inappropriate to apply the Fibre GRC Methodology to distribution and spine fibre when attributing costs between NGA and non-NGA? If so, do you agree with our proposals?

Question 10.1: Do you agree with our assessment of balanced transfer charges? If you disagree, please explain why.

Question 10.2: Do you agree with our assessment of unbalanced transfer charges based on external prices? If you disagree, please explain why and suggest a methodology to estimate the underlying costs to BT of internally providing services.

Question 10.3: Do you have any comments on BT's description of transfer charges in its 2015 Accounting Methodology Documents?

Annex 5

Estimate of market level impact

Introduction

A5.1 In this annex we provide a breakdown at a market level of the estimate of the possible impacts on the costs attributed to regulated markets if BT was to change the way it attributes costs in line with the proposals that we have made in Sections 4-9.

A5.2 We explain how and why the estimates of impacts that we have set out in this consultation have changed from June.

Estimated impact of June proposals

A5.3 In June we explained that our estimates of the possible impacts of our proposals were illustrative and were subject to some important caveats. Specifically, we explained that they were calculated using a model developed by Cartesian to simulate BT's cost attribution system and therefore the accuracy of the estimates was subject to the reasonableness of the simplifying assumptions made in the model and the accuracy of the input data provided by BT.

A5.4 We noted that one of the most significant limitations was that, to model the approximate impact of the proposed changes in aggregate, Cartesian modelled the impact of attributing all of these costs using a single attribution methodology (based on previously allocated costs) as a proxy for the combined impact of the individual changes.

A5.5 Subject to the above caveats, Table A5.1 sets out Cartesian's estimates of the impact of the changes to attribution methodologies that we proposed in June.

Table A5.1

June 2015 estimated impact (CCA) of proposed changes to the way BT attributes corporate overheads

	Market	Base case (£'m)	Adjusted base (£'m)	Delta (£m)	Delta (%)
Fixed Access Markets	Wholesale Line Rentals	1,346	1,255	(91)	(7%)
	Wholesale ISDN2	58	54	(3)	(6%)
	Wholesale ISDN30	71	66	(5)	(7%)
	Local Loop Unbundling	862	806	(56)	(6%)
Business Connectivity Markets	TISBO (<8 Mbps)	224	213	(11)	(5%)
	TISBO (8 - 45 Mbps)	13	12	(1)	(5%)
	TISBO (45 - 155 Mbps)	14	13	(1)	(5%)
	Wholesale Regional Trunk Segments	9	9	(1)	(6%)
	Point of Handover	4	4	-	(6%)
	AISBO Non-WECLA	354	317	(36)	(10%)
	AISBO WECLA	32	30	(3)	(8%)
	MISBO Non-WECLA	36	34	(3)	(7%)
Narrowband Markets	Calls: Call Origination	110	107	(3)	(3%)
	Calls: Call Termination	93	90	(2)	(3%)
	Interconnect Circuits	25	24	(1)	(4%)
Wholesale Broadband Access	WBA - Market 1	310	304	(7)	(2%)
	WBA - Market 2	119	116	(3)	(2%)
	Total Regulated	3,680	3,454	(226)	(6%)
	Total Unregulated	11,459	11,685	226	2%
	Grand Total	15,138	15,138	0	0%

Source: Cartesian

Estimated impact of November proposals

A5.6 In light of stakeholders' responses to the June Consultation and the further information obtained since June, we have revised our proposals concerning costs attributed using the Pay and ROA methodology (see Section 4) and have amended our definition of PAC. We have also made new proposals in Sections 5, 6, 7, 8 and 9 about other attribution methodologies.

A5.7 The estimates of impacts that we have presented in Sections 4-9 were calculated by BT on the basis of the 2013/14 Regulatory Financial Statements following our instructions

Overview of BT's estimation approach

A5.8 BT's estimates of the impacts were produced by a model that seeks to replicate the outputs of BT's cost attribution system (REFINE).

A5.9 The accuracy of BT's model is subject to the reasonableness of the simplifying assumptions made in the model and the accuracy of the input data.

A5.10 The following are the key limitations to BT's modelling:

- BT is unable to fully replicate the complexity of REFINE when conducting cost attribution. BT's model cannot therefore capture all of REFINE's subtleties.
- While BT's model has captured the dependency between AG103 and AG112 the modelling approach does not capture all dependencies between cost categories and activity groups.
- BT has been unable to obtain from its Property Group the information necessary to accurately model the impacts of our proposals for changes to the way that property is attributed.

A5.11 Nevertheless, BT's model has addressed the most significant limitation that we highlighted in June. BT has greater access to information from its REFINE system and a better understanding of how in practice REFINE will calculate costs. Instead of modelling the impact of attributing all costs attributed by Pay and ROA using a single attribution methodology (based on PAC) BT has modelled the impacts of the specific proposals that we have made.

A5.12 We will continue to work with BT over the coming months to better understand BT's model and its outputs. For its part BT is working to further enhance the accuracy of its model.

A5.13 We said in June that we would require BT to run those changes that we decide should be reflected in BT's financial data through its cost attribution system to derive more accurate calculations to be included in the base year data for the LLCC. BT has told us that this is not possible in the time available.

A5.14 We will therefore work with Cartesian to assure ourselves about the reasonableness of BT's modelled estimates of any decision that we take. To this end we will use our formal powers to require BT to model the impacts of those changes that we decide should be reflected in BT's financial data on the basis of the 2014/15 Regulatory Financial Statements.

Estimated impact of proposed changes

A5.15 Subject to the caveats that we have described, Tables A5.2 and A5.3 set out BT's estimates of the operating cost and MCE impact of the proposals we have made in this consultation.

Table A5.2: Estimated impact on operating costs of proposed changes that we have made in this consultation (November 2015)

	Market	Per RFS	Pay and ROA: AG112, AG103	Pay and ROA: COMCOS, AG409, AG410	Amend Property	Amend Electricity	Amend Software	Duct valuation	Fibre GRC	Total Adjustment	Adjusted RFS	November proposals
FAMR	Wholesale line rentals	1,345	(76)	(8)	(15)	(0)	(7)	(2)	(0)	(108)	1,237	(32)
	Wholesale ISDN2	58	(3)	(0)	(0)	0	(0)	(0)	(0)	(3)	55	(0)
	Wholesale ISDN30	72	(3)	0	1	3	(7)	(1)	(0)	(8)	64	(5)
	LLU	861	(41)	(0)	(16)	5	(1)	0	0	(53)	808	(12)
	Total FAMR	**2,336**	**(122)**	**(9)**	**(30)**	**7**	**(15)**	**(3)**	**0**	**(172)**	**2,164**	**(49)**
BCMR	TISBO < 8Mbps	228	(7)	(2)	1	3	(2)	1	0	(5)	223	2
	TISBO 8-45Mbps	13	(1)	(0)	(0)	(2)	(0)	0	0	(3)	10	(2)
	TISBO>45Mbps	14	(1)	(0)	(0)	(1)	(0)	0	0	(2)	12	(1)
	Point of handover	4	(0)	(0)	(0)	0	(0)	(0)	0	(0)	4	0
	Wholesale regional trunk segments	10	(1)	(0)	(0)	(1)	(0)	-	-	(1)	9	(1)
	AISBO non-WECLA	359	(24)	(3)	(2)	(1)	(4)	1	(0)	(33)	326	(9)
	AISBO-WECLA	32	(1)	0	(0)	(0)	(1)	0	(0)	(2)	30	(1)
	MISBO-non-WECLA	36	(1)	0	(0)	(0)	(0)	0	(0)	(2)	34	(0)
	Total BCMR	**696**	**(36)**	**(5)**	**(1)**	**(0)**	**(8)**	**2**	**(0)**	**(48)**	**648**	**(12)**
Narrowband	Call origination	110	(2)	(0)	4	3	1	0	-	5	115	7
	Call termination	93	(2)	(0)	4	3	(0)	0	0	4	97	6
	Interconnect	25	(0)	(0)	1	(0)	1	0	-	1	26	1
	Total Narrowband	**228**	**(4)**	**(1)**	**8**	**7**	**1**	**0**	**0**	**10**	**238**	**15**
WBA	WBA market 1	312	(5)	(1)	2	(15)	6	0	-	(12)	300	(7)
	WBA market 2	119	(1)	(0)	1		3	0	-	2	121	3
	Total WBA	**431**	**(6)**	**(1)**	**3**	**(15)**	**8**	**0**	**-**	**(10)**	**421**	**(4)**
Total	Total regulated	**3,691**	**(168)**	**(15)**	**(21)**	**(1)**	**(13)**	**(0)**	**0**	**(219)**	**3,472**	**(50)**
	Total unregulated*	11,451	168	15	21	1	13	0	(0)	219	11,670	50
	Grand total	**15,142**	**0**	**0**	**-**	**(0)**	**(0)**	**(0)**	**0**	**(0)**	**15,142**	**(0)**

** excludes group eliminations*

Table A5.3: Estimated impact on MCE of proposed changes that we have made in this consultation (November 2015)

	Market	Per 2013/14 RFS	Amend Pay and ROA	Amend Property	Amend Electricity	Amend Software	Duct valuation	Fibre GRC	Total Adjustment	Adjusted RFS
FAMR	Wholesale line rentals	5,836	(27)		(0)	(14)	(26)	(0)	(67)	5,769
	Wholesale ISDN2	205	(1)		8	(1)	(1)	(0)	5	210
	Wholesale ISDN30	210	(1)		1	(13)	(11)	(0)	(23)	187
	LLU	2,763	(8)		5	(1)	0	(4)	(8)	2,755
	Total FAMR	**9,014**	**(37)**	**-**	**14**	**(29)**	**(37)**	**(4)**	**(93)**	**8,921**
BCMR	TISBO < 8Mbps	615	(3)		7	(3)	6	(6)	2	617
	TISBO 8-45Mbps	48	(0)		(3)	(0)	1	(0)	(3)	45
	TISBO>45Mbps	60	(0)		(2)	(0)	1	(0)	(1)	59
	Point of handover	10	(0)		0	(0)	(0)	(0)	0	10
	Wholesale regional trunk segments	59	(0)		(1)	(0)	-	-	(2)	57
	AISBO non-WECLA	1,619	(5)		(1)	(12)	18	(57)	(57)	1,562
	AISBO-WECLA	91	(0)		(0)	(1)	0	(3)	(5)	86
	MISBO-non-WECLA	95	0		(0)	(0)	1	(2)	(2)	93
	Total BCMR	**2,597**	**(10)**	**-**	**0**	**(17)**	**27**	**(68)**	**(68)**	**2,529**
Narrowband	Call origination	211	(1)		7	1	2	-	9	220
	Call termination	200	(1)		7	(0)	0	(0)	6	206
	Interconnect	36	(0)		(0)	1	2	-	2	38
	Total Narrowband	**447**	**(3)**	**-**	**14**	**2**	**5**	**(0)**	**18**	**465**
WBA	WBA market 1	483	(2)		(28)	9	3	-	(18)	465
	WBA market 2	131	(0)			4	1	-	4	135
	Total WBA	**614**	**(2)**	**-**	**(28)**	**13**	**4**	**-**	**(14)**	600
Total	Total regulated	**12,672**	**(52)**	**-**	**(1)**	**(31)**	**(1)**	**(72)**	**(157)**	**12,515**
	Total unregulated	4,123	52		1	31	1	72	157	4,280
	Grand total	16,795	0	-	(0)	0	(0)	0	(0)	**16,795**