



Telstra Corporation Limited

Review of Telstra's Cost Allocation Methodology

July 2014
This report contains 59 pages
KPMG Telstra FLSM Report 040714

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Inherent Limitations

This report has been prepared as outlined in the Purpose Section. The services provided in connection with this engagement comprise an advisory engagement, which is not subject to assurance or other standards issued by the Australian Auditing and Assurance Standards Board and, consequently no opinions or conclusions intended to convey assurance have been expressed.

KPMG have indicated within this report the sources of the information provided. We have not sought to independently verify those sources unless otherwise noted within the report.

The findings in this report have been formed on the above basis.

Third Party Reliance

This report has been prepared at the request of Gilbert & Tobin in accordance with the terms of KPMG's letter of instruction dated 4th July 2014. This report is solely for the purpose set out in the Purpose Section and is not to be used for any other purpose. Neither KPMG nor any member or employee of KPMG undertakes responsibility arising in any way from reliance placed by a third party on this report for any other purpose. Any reliance placed is that party's sole responsibility.

1 Introduction

1.1 Purpose

The Australian Competition and Consumer Commission (**ACCC**) is reviewing pricing for Telstra Corporation Ltd's (**Telstra**) declared fixed-line services, in preparation for its publication of final access determinations (**FADs**) for each of these services. Among other things, the FADs will include revised service prices.

In making its FADs, the ACCC may have regard to allocations of cost to fixed line services, proposed by Telstra and set out in cost allocation models prepared by Telstra.

Telstra seeks an independent expert opinion on its cost allocation models and the cost allocation framework on which they are based. Accordingly, Telstra has engaged Gilbert & Tobin Lawyers (**Gilbert & Tobin**) to instruct the Expert to provide opinions on three specific questions. These questions are set out in a letter of instruction dated 4th July 2014 (**Letter of Instruction**), which is set out at Appendix A of this report.

This report addresses the requirements of the Letter of Instruction and has the sole purpose of assisting Gilbert & Tobin to provide legal advice to Telstra concerning the ACCC's FADs.

1.2 The Expert

The author of the expert opinions set out in this report is:

Keith Lockey
KPMG
147 Collins Street
Melbourne VIC 3000

Keith Lockey's qualifications and experience by which he has gained his specialised knowledge are set out in his CV set out at Appendix D of this report.

The Expert has read, understood and complied with Practice Note CM7: "Expert witnesses in proceedings in the Federal Court of Australia".

1.3 Background Documents

Gilbert & Tobin have provided the following documents in order for the Expert to conduct his review:

- a document describing the cost allocation framework that has been developed by Telstra, for use in the FLSM (**Telstra Allocation Framework Document** or **TAFD**¹); and
- the spreadsheets comprising the cost allocation model which Telstra has used to derive the allocators for use in the FLSM (**Telstra Allocation Models**²). We note that this cost allocation model is also referred to by the TAFD as the Cost Allocation Framework Model.

¹ Telstra Corporation, July 2014, Cost Allocation Framework for the ACCC Fixed Line Services Model, Framework and Model Guide, Version 1.

² Telstra Corporation, FLSM Allocation Model Final 23 June 2014.xlsx, received 23 June 2014

1.4 The matters the Expert has addressed

The Letter of Instruction requires the Expert to review the Telstra Allocation Framework Document and Telstra Allocation Models, and prepare a report setting out an expert opinion on the following matters:

- 1 Does the Telstra Allocation Framework Document set out cost allocation principles and methods that are consistent with generally accepted regulatory and accounting cost allocation principles, and with the FAD Allocation Fixed Principles?
- 2 Are the cost allocators utilised in the Telstra Allocation Models consistent with the principles and methods set out in the document Telstra Allocation Framework Document and with generally accepted regulatory and accounting cost allocation principles and with the FAD Allocation Fixed Principles?
- 3 Are the Telstra Allocation Models structured to allocate costs to declared fixed line services in a way that is consistent with:
 - a) generally accepted regulatory and cost allocation principles;
 - b) the FAD Allocation Fixed Principles; and
 - c) the Telstra Allocation Framework Document,and do they operate to calculate allocated costs consistent with this structure?

The Expert's opinions are set out at Section 2 of this report.

The factual findings and reasons on which the Expert has based his opinions are set out at Sections 3 to 5 of this report.

A glossary of terms used in the report, is set out at Appendix B of this report.

The sources of information the Expert has referred to are set out at Appendix C of this report.

2 The Expert's Opinions

The Expert's opinions on each of the questions posed to the Expert in the Letter of Instruction are set out below, together with summarised reasons for each opinion. Sections 3 to 5 of this report set out the factual findings on which the Expert's opinions are based and further explain the reasons for the Expert's opinions.

The Expert's opinions are based wholly or substantially on the Expert's specialised knowledge.

Please note that the Expert's opinion refers to the Telstra Allocation Models "FLSM Allocation Model Final 23 June 2014.xlsx", received 23 June 2014 and the information contained therein and does not extend to any subsequent amendments to the Telstra Allocation Models.

Question 1: Does the Telstra Allocation Framework Document set out cost allocation principles and methods that are consistent with generally accepted regulatory and accounting cost allocation principles, and with the FAD Allocation Fixed Principles?

The Expert's opinion is that the cost allocation principles set out in the Telstra Allocation Framework Document are consistent with generally accepted regulatory and accounting cost allocation principles, and with the FAD Allocation Fixed Principles.

To arrive at this opinion, the Expert:

- referred to:
 - the KPMG expert report "*The key principles underlying regulatory cost allocation*" of 17 April 2014 to establish generally accepted regulatory and cost allocation principles (**Generally Accepted principles**); and
 - the ACCC's Final Access Determinations No 1 to No 6 of 2011, to establish the FAD Allocation Fixed Principles (**FAD principles**);
- demonstrated that both the Generally Accepted principles and the FAD principles are mutually consistent; and
- identified five cost allocation principles set out in the Telstra Allocation Framework Document (**TAFD**) and compared those cost allocation principles to the Generally Accepted principles and the FAD principles.

That comparison is set out in Section 3 of this report. It shows that:

- each Telstra cost allocation principle is consistent with both specific Generally Accepted principles and with specific FAD principles; and
- the Telstra cost allocation principles do not also include principles which are inconsistent with either the Generally Accepted principles or the FAD principles.

The Expert also:

- identified methods set out in the TAFD which if implemented, would put into effect the Telstra cost allocation principles. These too are described in Section 3 of this report; and
- did not identify in the TAFD any methods which if implemented, would be inconsistent with the Telstra cost allocation principles.

Question 2: Are the cost allocators utilised in the Telstra Allocation Models consistent with the principles and methods set out in the document Telstra Allocation Framework Document and with generally accepted regulatory and accounting cost allocation principles and with the FAD Allocation Fixed Principles?

The Expert's opinion is that the cost allocators utilised in the Telstra Allocation Models are consistent with the principles and methods set out in the Telstra Allocation Framework Document and with the FAD Allocation Fixed Principles.

To arrive at this opinion, the Expert:

- examined each of the methods for calculating cost allocators utilised by the Telstra Allocation Models and the TAFD; and
- assessed the methods against the requirements of the principles set out in the TAFD and with the Generally Accepted principles and with the FAD principles.

The methods of allocation are set out at Appendix E of this report and the results of the examination are set out at Section 4.

The findings on which the Expert bases his opinion are set out in Section 4. The Expert found that all of the methods of allocation used mutually consistent bases of allocation which allocated costs without duplication or omission.

Also:

- for all of the Asset Classes except for CO07 Other Communications Plant and Equipment, CO08 Network Land, CO09 Network Buildings/Support and CO10 Indirect Capital Assets, the allocators were selected by Telstra to provide a causal basis of allocation; and
- for Asset Classes CO07, CO08, CO09 and CO10 where causal allocation factors may not have been practical, Telstra utilised a bases of allocation that provide good approximations to causal bases that are unlikely to distort the allocation of the costs of these Asset Classes to services.

Section 4 provides specific references to the Generally Accepted principles and FAD principles which all of these findings are consistent with.

In making these findings, the Expert relied on Telstra's views of the costs drivers of the assets, because an engineering understanding of the technical characteristics of the assets is outside of the Expert's expertise. Nor did the Expert form any views on the input data on which the allocation factors have been calculated.

The Expert did not find any characteristics of the methods of allocation to be inconsistent with the Generally Accepted principles and FAD principles.

Question 3: Are the Telstra Allocation Models structured to allocate costs to declared fixed line services in a way that is consistent with:

- a) generally accepted regulatory and cost allocation principles; and**
- b) the FAD Allocation Fixed Principles; and**
- c) the Telstra Allocation Framework document,**

and do they operate to calculate allocated costs consistent with this structure?

The Expert's opinion is that the Telstra Allocation Models are structured to allocate costs to declared fixed line services in a way that is consistent with:

- a) generally accepted regulatory and cost allocation principles; and
- b) the FAD Allocation Fixed Principles; and
- c) the Telstra Allocation Framework Document

and that they operate to calculate allocated costs consistent with this structure.

To form this opinion, the Expert:

- relied on his findings set out in Section 3 that the allocation methods set out in the TAFD are consistent with both Generally Accepted principles and with the FAD principles;
- examined the Telstra Allocation Models to document the logic that they employed; and
- compared that logic to the allocation methods specific to each Asset Class set out in the TAFD.

The Expert examined the operations of the Telstra Allocation Models by determining whether:

- each allocation method implemented by the Telstra Allocation Models was consistent with the relevant requirements of the TAFD and hence the associated Generally Accepted principles and FAD principles;
- each allocation calculation was appropriately replicated across different services and years within the forecast period covered by the Telstra Allocation Models;
- the Telstra Allocation Models operate to appropriately and completely transfer data between the different spreadsheets that comprise the Telstra Allocation Models; and
- the Telstra Allocation Models operate to properly calculate the totals of the cost allocation factors for different services, for each Asset Class and each year.

The structure of and logic employed by, the Telstra Allocation Models are set out in Section 3 and Appendix E of this report.

The results of the checks conducted by the Expert on the operation of the Telstra Allocation Models are set out at Section 5 and Appendix E of this report.

The Expert found that:

- the logic and structure of the allocation calculations implemented by Section 3 and Appendix E of this report are consistent with the allocation methods set out in the TAFD; and

- the Telstra Allocation Models operate to calculate allocations using methods that are consistent with the methods set out in the TAFD.

These calculations properly calculate the total of the cost allocation factors. In the Telstra Allocation Models examined by the Expert³, these totals amounted to 1.0000 for each Asset Class in each year of the forecast period. This indicates that consistent with the Generally Accepted principles and FAD principles, each Asset Class cost has been allocated without omission or duplication.

³ Telstra Corporation, FLSM Allocation Model Final, 23 June 2014 xlsx, received 23 June 2014
KPMG Telstra FLSM Report 040714 - 4 July 2014

3 Factual findings and reasons – Question 1

3.1 Introduction

This section of the report sets out the factual findings and reasons on which the Expert has based his opinion that the Telstra Allocation Framework Document sets out cost allocation principles and methods that are consistent with generally accepted regulatory and accounting cost allocation principles and with the FAD Allocation Fixed Principles.

3.2 Principles

It is necessary to first establish the principles by which the Telstra Allocation Framework Document may be assessed.

3.2.1 Generally accepted regulatory and accounting cost allocation principles

To establish these principles, the Expert has referred to the expert report prepared by the Expert “*The key principles underlying regulatory cost allocations*”, 17 April 2014. That report explains the basis of the following key principles (**Generally Accepted principles**) that apply to both capital and non-capital costs.⁴

Principle 1: Allocators should reflect a cause and effect relationship whenever practicable

This is necessary to provide a rational, transparent and replicable basis for selection for an allocation.

A cause and effect relationship also allows efficient costs to be allocated on a basis that maintains the nexus between the efficient cost and the factors that cause that efficient cost to arise.

In some instances, it may not be practicable to precisely identify and measure causal allocators of cost. In such cases, it may be necessary to substitute a close approximation to an ideal causal allocator, to provide allocations that do not differ materially from a causal allocation. Regulatory frameworks including the National Electricity Rules for example⁵, recognise this. This matter is dealt with by Principle 4 below.

Principle 2: Allocations of cost between services need to be on mutually consistent bases

This is an arithmetic requirement. If different allocators are used to allocate a single category of cost to different services then it will not be possible to demonstrate that:

- a shared cost has been allocated completely and that the allocated costs in total do not exceed the shared cost; and
- the resulting allocations of cost represent allocations of efficient cost.

⁴ KPMG, 14 April 2014, *The key principles underlying regulatory cost allocations*, pp. 3-5.

⁵ Australian Energy Markets Commission, National Electricity Rules, Rule 6.15.2 (3) (ii) and Rule 6A.19.2 (3) (ii)

Principle 3: Allocations of cost must be capable of reconciliation to the total cost being allocated

This basic arithmetic check complements Principle 2. It is necessary to demonstrate that:

- cost has been neither created nor lost as a result of the allocation; and
- the resulting allocations fairly reflect the causal relationship between each service and the total shared cost.

Principle 4: Cost allocators need to be practical

This principle is referred to in the summary for Principle 1. A cost allocation that cannot be practically implemented and replicated is unlikely to be acceptable by a regulator as a basis to develop and assess costs under a building blocks approach. In practical terms, appropriate judgements may need to be made to assess and trade off the identification and measurement of precise cause and effect relationships, with potentially less precise surrogates that may be better capable of implementation. Generally accepted principles of accounting materiality will apply to such assessments.

Principle 5: Allocators may change over time

Causal allocators seek to reflect underlying practical and operational cause and effect relationships between services and shared costs. Because these relationships can be expected to change as technologies and operations change, including for reasons of improving efficiency, it is reasonable to expect that allocators may change correspondingly. Further as information systems change, it may become possible over time, to better identify or measure allocators that more closely describe causal relationships than had been the case in the past.

Because of these reasons, allocators should not be regarded as static or permanent, although except where a service is undergoing frequent or significant change, they should also not be expected to change frequently.

Principle 6: Consistency and quality of allocation objectives and outcomes are more important than consistency of specific allocators

This is a corollary of Principle 5. If allocators were to be fixed permanently, they could result in inaccurate or inefficient allocations in the longer term.

Principle 7: Causal allocations of cost do not necessarily have continuous or directly proportional relationships with units of service output

Not all cause and effect relationships are ones of direct proportionality. Also, the cause of a change in cost may be other than an incremental change in a unit of service output. A cost may be necessary for a service but is not triggered or caused by units of service outputs.

Principle 8: The quantum of an allocator cannot be prescribed or fixed over multiple periods

This is because allocators should reflect underlying operational activity and realities. In the normal course of events for many costs, the proportion of a shared asset, resource or service,

represented by a cost that is consumed by a service, is unlikely to be static. Accordingly, the percentage of cost allocated to a service is also unlikely to be static. Even if the regulated service outputs themselves are static, the levels of activity of the other services with whom the cost is shared may not be. In which case, the percentage of shared cost attributable to the regulated service will change.

3.2.2 FAD allocation fixed principles

These are set out below.

6.14 Cost allocation factors

- (a) The allocation of the costs of operating the PSTN should reflect the relative usage of the network by various services.*
- (b) Direct costs should be attributed to the service to which they relate.*
The cost allocation factors for shared costs should reflect causal relationships between supplying services and incurring costs.
- (c) No cost should be allocated more than once to any service*
- (d) The determination of cost allocation factors should reflect the principles in 6.14 (a) – (c) above except where reliable information is not available to support the application of the principles.⁶*

3.3 Consistency of principles

A comparison against both sets of principles will be enhanced if both sets of principles are mutually consistent. The following table compares the FAD principles to the Generally Accepted principles established in Section 3.2.1, to help assess whether this is the case.

Table 3-1: Consistency of FAD Allocation Fixed Principles and Generally Accepted principles

FAD principle	Corresponding Generally Accepted principle ⁷
<i>(a) The allocation of the costs of operating the PSTN should reflect the relative usage of the network by various services.</i>	<i>Principle 1: Allocators should reflect a cause and effect relationship wherever possible.</i> <i>Principle 3: Allocations of cost must be capable of reconciliation to the total cost being allocated.</i> While FAD principle (a) does not explicitly state Principle 3, the FAD requirement for relative usage requires Principle 3.
<i>(b) Direct costs should be attributed to the service to which they relate.</i> <i>The cost allocation factors for shared costs should reflect causal relationships between supplying services and incurring costs.</i>	<i>Principle 1: Allocators should reflect a cause and effect relationship wherever possible.</i> The FAD principle is not explicit about this requirement in that it does not define or explain the terms “direct cost” or “attributed”. Nonetheless, this requirement is consistent with the Expert’s knowledge of precedents and

⁶ ACCC, 20 July 2011, as varied 14 December 2011, Final Access Determinations No. 1 to No. 6, pp. 6-7.

⁷ KPMG, 14 April 2014, The key principles underlying regulatory cost allocations, pp. 3-5.

FAD principle	Corresponding Generally Accepted principle ⁷
	<p>Principle 1 above. In particular:</p> <p><i>“The use of causal allocation is also consistent with the concept that some costs may be wholly or directly attributable to a service. Costs are necessarily subject to a cause, cost driver or trigger, it is just that where costs are directly attributable to a service, the service wholly accounts for the cost driver. Therefore, the distinction between:</i></p> <ul style="list-style-type: none"> • <i>a wholly or directly attributable cost;</i> • <i>an allocated cost; and</i> • <i>a cost that is not allocated at all to a service</i> <p><i>is one of degree only. In each case, the service accounts for:</i></p> <ul style="list-style-type: none"> • <i>all;</i> • <i>some; or</i> • <i>none</i> <p><i>of the causal driver, and hence allocator, of the cost respectively.”⁸</i></p>
<p><i>c) No cost should be allocated more than once to any service</i></p>	<p><i>Principle 2: Allocations of cost between services need to be on mutually consistent bases.</i></p> <p>Principle 2 is consistent with Principle 3. The description of Principle 2 describes how it has an objective of ensuring both that a cost is completely allocated and that the total of the allocated costs do not exceed the total of the shared cost subject to allocation.</p> <p><i>Principle 3: Allocations of cost must be capable of reconciliation to the total cost being allocated.</i></p> <p>If a cost were allocated more than once, Principle 3 would be violated.</p>
<p><i>(d) The determination of cost allocation factors should reflect the principles in 6.14 (a) – (c) above except where reliable information is not available to support the application of the principles.</i></p>	<p><i>Principle 1: Allocators should reflect a cause and effect relationship wherever practical.</i></p> <p>In some instances, it may not be practicable to precisely identify and measure causal allocators of cost. In such cases, it may be necessary to substitute a close approximation to an ideal causal allocator, to provide allocations that do not differ materially from a causal allocation. Regulatory frameworks including the National Electricity Rules for example⁹, recognise this. This matter is dealt with by Principle 4.</p>

⁸ KPMG, 14 April 2014, The key principles underlying regulatory cost allocations, p. 9.

⁹ Australian Energy Markets Commission, National Electricity Rules, Rule 6.15.2 (3) (ii)

FAD principle	Corresponding Generally Accepted principle ⁷
	<p><i>Principle 4: Cost allocators need to be practical.</i></p> <p>In this regard, the Generally Accepted principles and precedents set out in the KPMG report of 14 April 2014 go beyond the FAD principles, because unlike the FAD principles, they provide reasoned guidance on how to conduct allocations where information may not be available, such as that which would allow causal allocations.</p>

Accordingly, the FAD principles and the Generally Accepted principles are mutually consistent.

In addition, in the Expert's view, there are no characteristics of the FAD principles and Generally Accepted principles that are mutually inconsistent. Generally Accepted principles 5, 6, 7 and 8 set out matters on which the FAD principles are silent. In the Expert's view, these particular Generally Accepted principles provide additional guidance on cost allocation matters that are encompassed by the FAD principles. They do not lead to cost allocations that would be inconsistent with or contradictory to, the FAD principles.

3.4 The Telstra Allocation Framework Document

This section of the report establishes the cost allocation principles set out in Section 3 of the TAFD and provides the Expert's commentary on:

- whether the Telstra cost allocation principles align to the FAD principles and Generally Accepted principles; and
- how the TAFD indicates how the Telstra cost allocation principles are to be implemented.

The Expert also considers whether there are any FAD principles or Generally Accepted principles that the Telstra cost allocation principles may not implement or may be inconsistent with.

The Expert's response to question 3, which is explained in Section 5 of this report goes on to assess how the requirements of the TAFD are put into practical effect by the Telstra Allocation Models.

3.4.1 Telstra cost allocation principles

Telstra cost allocation principle – A

The model employs a fully allocated cost framework. In all cases where an Asset Class specific allocator is developed, the total allocation of costs for the Asset Class across all platforms and services is equal to 1. Within the model, a check sheet confirms that the total allocation of costs for each Asset Class is equal to 1.

Corresponding FAD principles and Generally Accepted principles reported by KPMG

This principle is consistent with:

- FAD principle c); and
- Generally Accepted principles 2 and 3, described at Section 3.2.1.

TAFD requirements

The TAFD describes requirements of the Telstra Allocation Models that implement this principle. It requires that the allocation factors in the Telstra Allocation Models should all sum to 1¹⁰, to achieve a purpose of demonstrating that all shared asset costs have been accounted for in the allocations. Section 5 of this report, describes how the Telstra Allocation Models achieve this outcome.

Telstra cost allocation principle - B

To the greatest extent possible, specific Asset Class allocators (that employ a fully allocated cost approach) are used. For five Asset Classes, a general allocator is used, in which an allocation is estimated for the regulated fixed line wholesale services based on those services allocations that derive from the other Asset Class specific allocators. Ideally, no general allocators would be used. However, some Asset Classes require the use of a general allocator because the data required to estimate cost causal relationships for all the relevant services is not readily available.

Corresponding FAD principles and Generally Accepted principles reported by KPMG

This principle is consistent with:

- FAD principle d);
- Generally Accepted principle 1 (second paragraph); and
- Generally Accepted principle 4.

¹⁰ Telstra Corporation, July 2014, Cost Allocation Framework for the ACCC Fixed Line Services Model, Framework and Model Guide, p. 17.

TAFD requirements

Section 5 and Figure 3 of the TAFD set out requirements that are consistent with principle B. They describe how specific allocators are derived for most Asset Classes and General Allocators for others. In particular, Section 5.2 describes the derivation of Asset Class Specific Allocators and Section 5.3 describes the derivation of General Allocators for Core FLSM Asset Classes.

Section 4 of this report which responds to question 2, considers which cost allocators utilised in the Telstra Cost Allocation Models are consistent with the Telstra cost allocation principles and the methods set out in the TAFD.

Telstra cost allocation principle - C

Different cost allocation approaches were adopted for different Asset Classes to reflect the different drivers of costs for different Asset Classes. Each Asset Class is also examined to determine whether or not cost drivers vary for different equipment and asset types that make up the overall Asset Class. Where practicable, the framework will employ different allocation approaches for different components of an Asset Class where logical differences in the cost drivers are identified.

Corresponding FAD principles and Generally Accepted principles reported by KPMG

This principle is consistent with:

- FAD principle b) because it seeks to reflect causal relationships between the factors that cause costs to be incurred (i.e. the cost drivers) and the shared cost that is allocated to the service. Telstra cost allocation principle C allows for different assets having different cost drivers, which facilitates cost allocations to accurately reflect causal relationships; and
- Generally Accepted principle 1 (first paragraph) for the reasons as set out in the paragraph above.

TAFD requirements

Section 5 of the TAFD sets out methods which implement principle C. The consistency of the allocation factors with these methods is examined in Section 4 of this report.

Telstra cost allocation principle - D

The ultimate output of the CAF model is a set of cost allocators for the FLSM Asset Classes that apply to the FLSM services (the regulated fixed line wholesale services). These cost allocators are updated for each year over the period FY2014 to FY2019 based on the best available forecast data. Forecast allocators are based on demand forecasts provided by Telstra in response to the 2013 Building Block Model Record Keeping Rule (BBM RKR) request (RKR Response), as well as additional forecasts for services not captured by the RKR Response, but prepared on a consistent basis. Where no forecast demand data is available, the latest, best available data is used as a basis for allocating future costs.

Corresponding FAD principles and Generally Accepted principles reported by KPMG

This principle is consistent with:

- FAD principle b) because it provides for allocators for different FLSM Asset Classes that facilitate more accurate allocation than if a uniform allocator were used;
- Generally Accepted principle 1, for the same reasons as it is consistent with FAD principle b);
- Generally Accepted principle 4, because it allows for the best available data to be used to provide for practical outcomes rather than incomplete allocations where ideal data is not available; and
- Generally Accepted principles 5, 6 and 8 by allowing allocators to utilise the best available data.

The Expert also notes that Telstra cost allocation principle D aims to comply with the FAD principles by using the best available information.

TAFD requirements

Section 5 of the TAFD implements this principle by describing methods for how allocation factors are calculated, for each Asset Class.

Appendix A of the TAFD outlines the processes by which demand is forecast and provides a description of the services whose forecast demand is utilised by the Telstra Allocation Models, in order to implement principle D.

Telstra cost allocation principle - E

Telstra has simplified the cost allocation process by only seeking to produce service-level cost allocators for Fixed Line Services – and in particular the regulated fixed line wholesale services. Where other services make use of a given Asset Class, the allocation is generally made to a broad “other service” category, as there is no need (for the purposes of the FLSM) to determine the specific allocators for individual services within the other services category

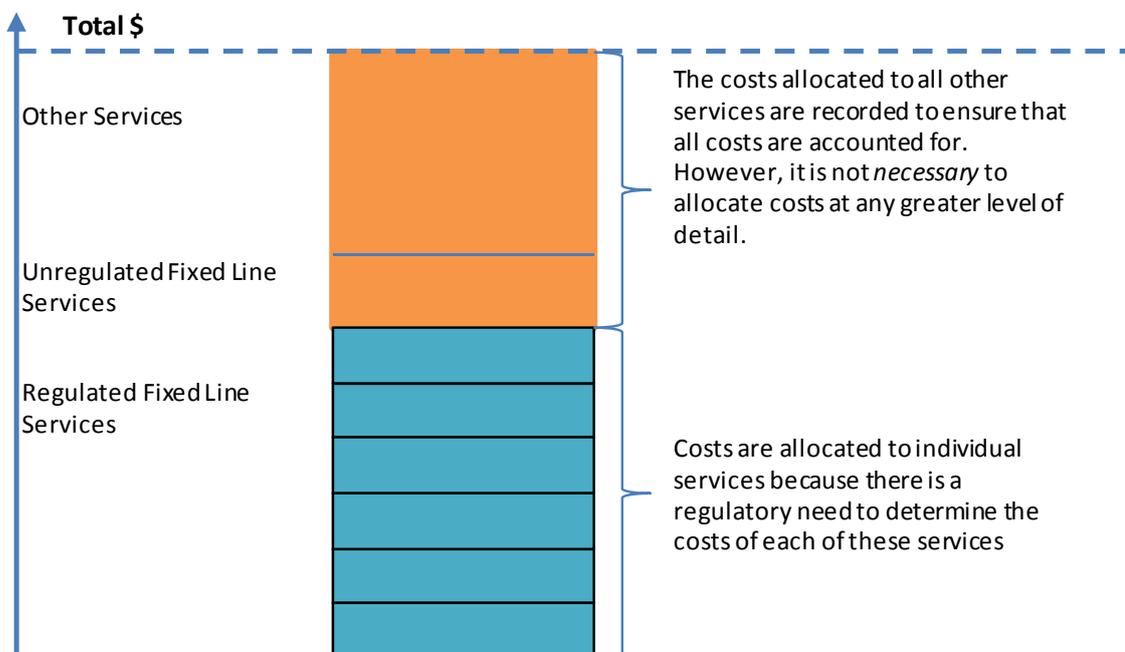
Corresponding FAD principles and Generally Accepted principles reported by KPMG

This principle is consistent with:

- FAD principle a). This is because in order to ascribe properly the relative usage of an asset between services, it is necessary to consider all of the services that may utilise an asset. Their status as regulated or not is irrelevant to the arithmetic calculation of relative usage between services. However, it is not necessary for the services to be defined at any level of detail than that necessary to:
 - determine relative usage between services of the total asset capacity; and
 - the detail required to allocate costs for regulatory purposes.

This is illustrated by the diagram below. This shows schematically the allocation between services of the total cost of an asset.

Figure 3-1: Illustration of allocation of a cost between services



It is necessary to allocate or attribute total costs between Regulated Fixed Line Services and all Other Services in order to determine properly, the cost to be allocated to each of the Regulated Fixed Line Wholesale Services.

- FAD principle c). In order to assess whether a cost has been allocated more than once to any service, it is necessary to reconcile the total of that cost incurred or forecast to be incurred, with the total of the amounts allocated or attributed to individual services. This reconciliation allows the allocation or attribution of a cost to services to be accounted for in its entirety. Figure 3-1 demonstrates how Telstra cost allocation principle E achieves this objective and hence meets the requirements of FAD principle c);
- Generally Accepted principle 3. Figure 3-1 illustrates how Telstra cost allocation principle E is necessary to achieve Generally Accepted principle 3; and
- Generally Accepted principle 2. Table 3-1 explains how Generally Accepted principle 2 is consistent with Generally Accepted principle 3. Compliance with Telstra cost allocation principle E is necessary to also comply with Generally Accepted principle 2.

TAFD requirements

Section 5 of the TAFD is consistent with this principle. It describes the allocation methods to be used for each Asset Class, which include requirements for allocation to services other than regulated fixed line services, where an Asset Class is utilised by such a service.

3.4.2 Summary

Table 3-2 summarises the findings of Section 3.4.

Table 3-2: Alignment of Telstra cost allocation principles with FAD principles and Generally Accepted principles

Telstra cost allocation principle	Corresponding principles	
	FAD principles	Generally Accepted principles
A	c)	2 & 3
B	d)	1 & 4
C	b)	1
D	b)	1, 4, 5, 6 & 8
E	a) & c)	2 & 3

Table 3-2 illustrates that the five Telstra cost allocation principles align with:

- all of the FAD principles set out at Section 3.2.2; and
- Generally Accepted principles 1 to 6 and Generally Accepted principle 8.

Generally Accepted principle 7 addresses a matter on which both the Telstra cost allocation principles and FAD principles are silent. However, in the Expert's view, there are no matters set out in either the Telstra cost allocation principles or the FAD principles which are inconsistent with or contradict, Generally Accepted principle 7.

Further, on the basis of the descriptions of the:

- Telstra cost allocation principles;
- FAD principles; and
- Generally Accepted principles

described and referred to in this report, there are no other matters in either the FAD principles or the Generally Accepted principles with which the Telstra cost allocation principles are inconsistent.

3.5 Findings in relation to question 1

Section 3.3 has established that:

- the FAD principles; and
- the Generally Accepted principles, established in the KPMG report of 14 April 2014, "*The key principles underlying regulatory cost allocation*", which provide additional guidance on matters that are consistent with the objectives of the FAD principles

provide a valid and mutually consistent basis against which the Telstra cost allocation principles set out in the TAFD, can be compared and assessed.

Section 3.4 records that comparison. It demonstrates that:

- the Telstra cost allocation principles are consistent with both the FAD principles and the Generally Accepted principles; and
- the TAFD sets out requirements that act to:
 - implement the Telstra cost allocation principles; and
 - allocate wholly and without duplication, the costs of different classes of assets to Regulated Fixed Line Services, Unregulated Fixed Line Services, and Other Services that utilise those classes of assets.

Further, the Expert did not identify any methods set out in the TAFD which were inconsistent with the Telstra cost allocation principles, and hence the Generally Accepted principles and FAD principles.

The implementation of these methods by the Telstra Allocation Models is described in Sections 4 and 5 of this report.

4 Factual findings and reasons – Question 2

4.1 Introduction

This section of the report sets out the factual findings and reasons on which the Expert has based his opinion that the cost allocators utilised in the Telstra Allocation Models are consistent with the principles and methods set out in the Telstra Allocation Framework Document, with generally accepted regulatory and cost allocation principles and with the FAD Allocation Fixed Principles.

4.2 Approach

To make this assessment, the Expert has:

- referred to his findings set out in Section 5 and Appendix E which describe:
 - the allocation methods used in the Telstra Allocation Models; and
 - how those methods are consistent with the TAFD and consequently the Generally Accepted principles and the FAD principles.

Additionally, in this section of the report, the Expert examines each allocator for consistency with the Generally Accepted principles and the FAD principles.

Each allocation method is identified by reference to Appendices E.3 to E.10 which describe for each:

- how it is calculated; and
- the Asset Classes to which it is applied.

Appendix F complements Appendix E by illustrating how each allocator is calculated.

4.3 Findings in relation to question 2

In answering this question, the Expert has assumed that he can rely on Telstra's identification of the drivers of cost for each Asset Class on which a causal allocator may be based. This is because a technical or engineering understanding of the drivers of asset cost is outside of the Expert's expertise. The Expert has considered whether the calculation of these allocators based on these assumptions, is consistent with the principles set out in the TAFD and with Generally Accepted principles and with the FAD principles.

4.3.1 Service demand (Appendix E.3)

A measure of service demand is a reasonable basis of allocation of cost since it is reasonable to relate cost to the sources of demand for cost.

For some services, demand is measured by Services in Operation (SIO). For others, it is measured by Minutes Of Use (MOU). Therefore where service demand is used to allocate cost across services, it is necessary for those services to use consistent units of demand to arrive at an arithmetically valid allocation and to be consistent with Generally Accepted principle 2 (see

Section 3.2.1). The subsequent assessments of the allocators address this question for each Asset Class.

Service demand is a function of both demand and Routing Factors whose use is described on page 17 of the TAFD. Where a Routing Factor is applied to fixed line voice services, a Routing Factor other than 1 may be input. Appendix B of the TAFD explains that:

- this is to reflect the relative load placed on an asset by different services; and
- Routing Factors are calculated by a separate Routing Factor Model.

The Expert observes that allocating costs on the basis of relative usage of an asset which is a function of both inputs of Forecast Usage Demand and the Routing Factors, is a reasonable causal allocation and is consistent with FAD principle (a) (see Section 3.2.2).

4.3.2 Asset Classes CA01 and CA02 for ULLS Bands 1-3, 4 (Appendix E.4)

Asset Class CA01 is Ducts and Pipes, and CA02 is Copper Cables. The Allocation spreadsheet firstly allocates all SIOs between:

- PSTN retail access services; and
- Basic access services.

Asset Classes CA01 and CA02 are allocated to Regulated Fixed Line Services as follows:

- with the SIO allocated to PSTN retail services, only CA01 and CA02 costs attributable to ULLS are allocated. The remaining CA01 and CA02 PSTN costs (allocated on an SIO basis) are accounted of as other Fixed Line and Other Services.

The allocation to ULLS services (by band) is considered in this Section 4.3.2 and in Appendix E.4.

The allocation of CA01 and CA02 costs to Basic Access Services (WLR) as a whole is considered at Section 4.3.3 below and in Appendix E.5.

This is in effect a two-stage allocator, comprising a compound of:

- the share of demand for ULLS across bands 1 to 4 attributable to each band; and
- the preparation of aggregate (to total) duct kilometres attributable to each ULLS band.

(There is an additional term "Band Usage" included for computational purposes. This is in effect a 'switch' in that when set to 0, no allocation is made. On the basis it is set to 1, there should always be a value in term A in Appendix E.4. However, the value of 1 does not modify the allocation and is therefore not considered further.)

The Expert comments that:

- the term representing the proportion of total duct kilometres is a causal basis of allocation of duct and pipe costs, based on the assumption that duct and pipe costs are directly proportional to duct kilometres for each band, attributable to ULLS;
- the use of bands to recognise the different average costs per SIO that arise from the geographic distribution of customers, is a reasonable approach and consistent with

Generally Accepted principles 1 and 4 (Section 3.2.1) and FAD principles (a) and (b). It would be impractical to allocate duct and pipe length to individual SIOs;

- similarly, based on the assumption of a directly proportional relationship between the cost of copper cables and duct kilometres, this is a causal allocator for Asset Class CA02, too; and
- it is arithmetically valid to derive a compound cost allocator by multiplying the two components, as has been done by the TAFD and the Telstra Allocation Models.

4.3.3 Asset Classes CA03 / CA04 / CA05 / CA06 / CA07 / CA08 / CA09 / CO02 / CO03 / CO11 / CO12 (Appendix E.6)

These Asset Classes use service demand as an allocator. Section 4.3.1 has established that service demand is a reasonable causal allocator.

Inspection of the measures of demand for each of these Asset Classes, set out in the Allocations spreadsheet of the Telstra Allocation Models shows that demand for the services to which each Asset Class is allocated, is measured in consistent units, i.e. either SIOs or MOUs. This approach is therefore consistent with Generally Accepted principle 2 (see Section 3.2.1).

The TAFD explains:

- in Section 5.2.6 the costs of Asset Class CO11 are wholly attributable to the LSS. The Expert observes that this is consistent with applying service demand as a basis of allocation to this Asset Class. Section 3.1.4 of the 14 April 2014 KPMG report¹¹ explains this principle further. The approach taken by the TAFD is also consistent with FAD principle (b) (see Section 3.2.2).

Accordingly, application by the Telstra Allocation Models of service demand as a basis of allocation where it is a driver of cost, is consistent with the Generally Accepted principles and the FAD principles.

4.3.4 Asset Classes CA01 and CA02 for WLR (Appendix E.5)

Appendix E also illustrates how the WLR service costs are analysed according to the bands used for ULLS allocations. Inspection of the Telstra Allocation Models show that consistent with the explanation in Section 4.3.2, this allocation operates by using total SIOs attributable to both PSTN and Basic access (WLR) services to allocate total CA01 and CA02 costs between PSTN and WLR. This is a mutually consistent basis, consistent with Generally Accepted principle 2 (Section 3.2.1).

4.3.5 Asset Class CO01 (Appendix E.7)

The allocation method for CO01 (Local switching equipment) is structured to address the fact that demand for some services that utilise this Asset Class are measured in SIOs while others are measured in MOUs.

The allocation factor is the sum of two allocators – one for SIOs, the other for MOUs. Each uses service demand for a service as a proportion of total service demand, as an allocator.

¹¹ KPMG, April 2014, Telstra Corporation, The key principles underlying regulatory cost allocations, p9
KPMG Telstra FLSM Report 040714 - 4 July 2014

Appendix E.7 also shows that the terms α and $(1 - \alpha)$ are used to ensure that the sum of the allocation factors equals 1.

The factor α is a hard coded estimate input to the Telstra Cost Allocation Models (e.g. see cells C572:D572 in the Allocations spreadsheet). The TAFD explains the basis for this on page 32. This indicates that this:

- reflects the relative written down values of the CO01 local switching equipment assets that are used to provide services where demand is based on SIOs and MOUs; and
- allocation is based on the physical characteristics of the switching equipment.

On this basis, this apportionment is a causal allocator that is consistent with the Generally Accepted principles and FAD principles.

4.3.6 Asset Class CO04 (Appendix E.8)

Asset Class CO04 is inter-exchange cables, whose characteristics are described in the TAFD at Section 5.2.3.

Section 5.2.3 of the TAFD indicates that the length of optical fibre cables required to deliver particular services is the primary cost driver. This is consistent with the Telstra Allocation Models' use of Routing Factors to determine service demand for this Asset Class (see Rows 1342 and 1343 of the Allocations spreadsheet).

Appendix E.8 shows that the allocation factor comprises two components that are added together:

- an allocation factor component that uses service demand as a basis of allocation for services that do not use Telstra's SDH and PDH transmission networks; and
- an allocation factor for services that do use Telstra's SDH and PDH transmission networks.

Inspection of the Allocations spreadsheet (Rows 655 to 707) shows that for the services that do not use Telstra's transmission networks:

- SIOs are used to measure demand for PSTN services; and
- MOUs are used to measure demand for DSL services.

However, Appendix E.8 also shows that to avoid inconsistent allocations and to avoid omission or duplication of allocation by using additive components, each component is subject to a Platform Allocation Factor.

Separate Platform Allocation Factors are used for:

- DSL services;
- PSTN services;
- Transmission services; and
- Other services.

The Platform Allocation Factors add to 1. (See Rows 671 to 676 of the Allocations spreadsheet and Table 25 of the TAFD.) Their derivation which is based on shares of data attributable to each service type, is explained in Section 5.2.3 of the TAFD.

Appendix E.8 shows that the second component of the allocation factor is the CO05 (Transmission equipment) allocator (see Section 4.3.8 below) multiplied by the Transmission equipment platform allocator.

On the basis that the Transmission equipment allocator meets the Generally Accepted principles and FAD principles and that certain optic fibres are used exclusively for transmission networks (see page 36 of the TAFD) then this component too is a causal allocator which is consistent with the principles. Because the transmission and other platform allocators are complementary and add to 1, they provide a weighted average allocation for CO04 and do not cause allocated costs to be duplicated or omitted.

4.3.7 Asset Classes CO05 and CO06 (Appendix E.9)

This basis of allocation provides a weighted average allocator according to the extent to which Service demand is met by SDH, PDH or other equipment. The weightings are based on the written down value of the physical characteristics of the equipment described in Section 5.2.4 (page 40) of the TAFD.

These allocation factors are further split according to the type of service, namely:

- DSL;
- PSTN; or
- Other.

This too is explained at Section 5.2.4 of the TAFD, which indicates that physical demand on capacity (transmission links) has been used as a basis of allocation.

Appendix E.9 illustrates that the overall allocation factor is the additive outcome of three components, one for each of the three service types outlined above.

The use of complementary platform and service factors with causal bases means that the resulting allocation factors for Asset Class CO05 are weighted average causal allocators that do not omit or duplicate allocated costs and accord with the Generally Accepted principles and FAD principles.

Section 5.2.5 of the TAFD indicates that Asset Class CO06 are relatively immaterial and are used primarily to support the transmission systems (Asset Class CO05). On this basis, the allocators calculated for CO05 are used to allocate the annual costs of CO06 assets to services.

The Expert observes that the application of a good proxy for a causal allocation to immaterial costs is consistent with:

- Generally Accepted principle 4 (see Section 3.2.1); and
- Regulatory precedent¹².

¹² For example, see Australian Energy Markets Commission, National Electricity Rules, Rule 6.15.2 (3) (ii) (B) and Office of the Tasmanian Economic Regulator, may 2013, Water and Sewerage Accounting Ring fencing Guideline, clause 4.3.7 (b)

4.3.8 Asset Classes CA10 and CO10 (Appendix E.10)

Section 5.3.2 of the TAFD describes that these are indirect assets, predominantly hardware and software but also include motor vehicles and mechanical aids.

The Expert observes that the allocation of the costs of such assets to services is consistent with both the Generally Accepted principles and the FAD principles (as well as a broader regulatory precedent) where such assets are necessary to or unavoidable for service provision.

The TAFD explains that these assets as well as Asset Classes CO07, CO08 and CO09 (see Section 4.3.9 below) are subject to what the TAFD has termed, General Allocation Factors. The Expert comments that:

- the General Allocation Factors which are explained below in the following sub-section, do not necessarily reflect a direct causal link characterised by a physical characteristic associated with demand on service capacity;
- in general terms, such indirect assets often have cost drivers which do not vary directly with levels of service output;
- accordingly, determining closely causal bases of allocation can be more complex than for other types of assets; and
- Generally Accepted principles 4 and 7 (see Section 3.2.1) reflect the regulatory and accounting precedents that have been applied to these forms of cost allocations.

Section 5.3.2 describes the “revenue share” approach which has been adopted. This has the effect of allocating the indirect asset costs on the weighted average of all allocations of Core Asset Classes to services.

The Expert comments that this is a reasonable basis which is highly unlikely to distort allocations and is consistent both with the Generally Accepted principles outlined above and with the circumstances as anticipated by Generally Accepted principle 1 where close approximations to causal bases may be required (see Section 3.2.1).

The Expert also notes that while FAD principle (d) (Section 3.2.2) on the face of it permits non-causal factors in certain circumstances, the approach adopted for these assets by the TAFD is a close approximation to a causal approach.

4.3.9 Asset Classes CO07 / CO08 / CO09 (Appendix E.11)

The Asset Classes refer to Other Communications, Network Local and Network Buildings and Support.

This approach follows that outlined by Section 4.3.8 above, except that it adjusts for the extent to which assets may be utilised by third parties and not for service provision.

Again, this approach is consistent with the Generally Accepted principles and the FAD principles for the reasons outlined in Section 4.3.8.

5 Factual findings and reasons – Question 3

5.1 Introduction

This section of the report sets out the factual findings and reasons on which the Expert has based his opinion that the Telstra Allocation Models are structured to allocate costs to declared fixed line services in a way that is consistent with:

- a) generally accepted regulatory and cost allocation principles; and
- b) the FAD Allocation Fixed Principles; and
- c) the Telstra Allocation Framework Document

and that they operate to calculate allocated costs in a way that is consistent with this structure.

The remainder of this section considers in Section 5.2 the structure of the Telstra Allocation Models and then in Section 5.3 their operation.

5.2 Assessment of structure of the Telstra Allocation Models

5.2.1 Approach

Section 3 of this report has established that the TAFD sets out methods that are consistent with cost principles that are also set out in the TAFD and with Generally Accepted principles and the FAD principles.

Accordingly, the Expert:

- documented the logical structure of the Telstra Allocation Models; and
- assessed whether that structure is consistent with the allocation methods set out in the TAFD for each Asset Class.

If it is consistent then it would be rational to conclude on the basis of the findings of Section 3 of this report that the structure of the Telstra Allocation Models is also consistent with:

- the Generally Accepted principles; and
- the FAD principles.

5.2.2 Description of the physical structure of the Telstra Allocation Models

The Telstra Allocation Models physically comprise a cover sheet and three spreadsheets, within a single workbook, those three spreadsheets being:

- “Summary”;
- “Allocations”; and
- “INPUT demand”.

Appendix E describes the relationships between these spreadsheets and the components of the logical structure allocation calculations.

To address the requirements of question 3, it is necessary to assess the logical structure of the Telstra Allocation Models, which governs their operation.

5.2.3 Assessment of the logical structure of the Telstra Allocation Models

To make this assessment, the Expert:

- examined the Telstra Allocation Models to identify and document the:
 - inputs;
 - calculations; and
 - outputsfor each allocation of Asset Class costs to services; and
- compared that documented logic to the allocation methods set out in the TAFD.

Appendix E sets out the documented logic in diagrammatic form. It sets out a separate sheet for each different allocation calculation. Several Asset Classes use common rather than unique allocation calculations. Accordingly, Table E - 1 in Appendix E also indexes the different calculations to the Asset Classes.

The Expert was able to agree the allocation methods utilised by the Telstra Allocation Models to the methods set out in the TAFD. Table E - 1 in Appendix E also cross refers each method used by the Telstra Allocation Models and documented in Appendix E, to the TAFD.

5.3 Assessment of the operation of the Telstra Allocation Models

This sub-section of the report describes the detailed checks which were conducted on the Telstra Allocation Models to assess whether the arithmetic operation of the Telstra Allocation Models is consistent with methods of calculation described at Appendix E and set out in the TAFD.

Four tests were conducted. The first two tests were:

- spot checks that assessed whether the allocation factors output by the Telstra Allocation Models were properly calculated on a basis that was consistent with the allocation methods set out in the TAFD. An example of each of the nine different allocation methods utilised in the Telstra Allocation Models was checked; and
- the application of spreadsheet analysis software to the Telstra Allocation Models. The purpose was to test whether there were any inconsistencies in the ways in which each allocation method calculation was replicated across different services, Asset Classes (where an allocation method may be common to more than one Asset Class) and years in the forecast period.

Therefore, the results of these first two steps help to determine whether each allocation calculation in the Telstra Allocation Models is consistent with the TAFD. This is because the checks compare allocation calculations for consistency with sample allocation calculations

which have themselves been checked both arithmetically and for consistency with the TAFD and hence the Generally Accepted principles and FAD principles.

The other two steps comprised:

- a check of whether data is completely and accurately transferred between the different spreadsheets in the Telstra Cost Allocation Models. This was to test whether the physical structure of the Telstra Allocation Models operates to implement the flow of information between:
 - Forecast Usage Demand recorded on the INPUT demand spreadsheet; and
 - the calculations and other inputs set out in the Allocations spreadsheet; and
 - the allocation factors set out in the Output spreadsheetdescribed diagrammatically in Appendix E; and
- a check of whether the cost allocation factors for each Asset Class and year add to 1. This is to test whether the cost allocators operate to completely allocate all Asset costs without omission or duplication.

5.3.1 Allocation calculations

The specific tests are detailed at Appendix F. They did not reveal any calculations of allocations that were inconsistent with the corresponding methods set out in the TAFD and described at Appendix E, or on this basis, that were arithmetically incorrect.

5.3.2 Consistency of calculations

Spreadsheet analysis software available to KPMG was used to assess whether the allocation calculations applied to each Asset Class that had been tested in the preceding step was replicated:

- across the different services to which costs were allocated; and
- for each year (2014 to 2019) for which the Telstra Allocation Models calculate allocation factors

within each Allocation spreadsheet.

The specific references within each different cell necessarily change because they need to refer to different input data or intermediate calculation cells according to the particular service and year for which an allocation factor is calculated.

This check therefore assessed the structure and relative references to other cells used by the allocation calculations in the Allocations spreadsheet of the Telstra Cost Allocation Models.

These procedures demonstrated that the allocation calculations for each Asset Class were replicated appropriately for each service and year for which allocation factors were calculated.

5.3.3 Links between spreadsheets

The Expert determined whether the allocation factors calculated for:

- each Asset Class and service; and
- each year

recorded on the Summary spreadsheet of the Telstra Cost Allocation Models referred to the corresponding allocation factor calculated in the Allocations spreadsheet. This was done by making specific checks that individual values were appropriately referenced to the Allocations spreadsheet and then using the spreadsheet analysis software described above to check that these relative references were appropriately replicated across the entirety of the Summary spreadsheet.

The same approach was used to determine whether service demand data was completely and appropriately transferred to the Allocations spreadsheet.

These procedures demonstrate that the Telstra Cost Allocation Models operate to transfer data between the three component spreadsheets in a way that is consistent with the operation of the Telstra Allocation Models described at Appendix E.

5.3.4 Completeness of allocation factors

This completeness check is recorded in the Allocations worksheet which calculate both:

- allocation factors for Regulated Fixed Line Services; and
- the complementary allocation factors for Unregulated Fixed Line Services and Other Services.

The Summary worksheet disclosed allocation factors for Regulated Fixed Line Services only and therefore allocation factors in the Summary worksheet should not be referred to for the completeness check. Rather, the Expert examined the cells in the Allocations spreadsheet that calculated the total of the allocation factors for each Asset Class, for each year of the period 2014 to 2019 (cells in the range O2:O264, except for unused cells relating to spare Asset Classes for which no allocation factors were calculated).

The Expert found that these cells in the Allocations spreadsheet:

- were structured to properly calculate the total of the allocation factors for all services; and
- calculated values of 1.0000 for each Asset Class and year.

On this basis, the Expert has determined that the allocation factors operate to completely allocate all asset costs without duplication and hence are consistent with both the Generally Accepted principles and the FAD principles.

5.4 Findings in relation to question 3

Section 5.2.3 and the logical structure of the allocation calculations, together with the findings on the completeness of allocation factors set out at Section 5.3.4, demonstrate that the Telstra Allocation Models are structured to be consistent with the TAFD and hence with both Generally Accepted principles and the FAD principles.

Section 5.3 evidences that the Telstra Allocation Models operate to calculate allocated costs in a way that is consistent with the structure provided by the TAFD and its associated principles. This is because:

- individual calculation methods employed by the Telstra Allocation Models have been checked for consistency with the TAFD and no inconsistencies were identified;
- the flow of data and information through the different calculations and spreadsheets in the Telstra Allocation Models have been checked and no inconsistencies or errors were identified; and
- the Telstra Allocation Models operate to:
 - allocate Asset Class costs between services without omission or duplication; and
 - demonstrate to the user of the Telstra Allocation Models that it does so.

6 Expert's statement

Keith Lockey has made all the inquiries that Keith Lockey believes are desirable and appropriate and no matters of significance that Keith Lockey regards as relevant have, to Keith Lockey's knowledge, been withheld from the Court.



Keith Lockey



Appendix A: Letter of instruction from Gilbert & Tobin Lawyers



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4 July 2014

By email

Mr Keith Lockey
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Confidential and privileged

Dear Mr Lockey

Review of Telstra cost allocation methodology

We act for Telstra Corporation Ltd (**Telstra**) are currently advising Telstra in relation to a review of pricing for declared fixed-line services.

As you may be aware, the Australian Competition and Consumer Commission (**ACCC**) is currently conducting a review of pricing for Telstra's declared fixed-line services (the Unconditioned Local Loop Service (**ULLS**), Line Sharing Service (**LSS**), Wholesale Line Rental (**WLR**), Local Carriage Service (**LCS**), PSTN Originating and Terminating Access (**PSTN OTA**), and Wholesale ADSL). At the conclusion of this inquiry the ACCC will publish final access determinations (**FADs**) for each of these services which will include (among other things) revised service prices.

In preparation for this inquiry, Telstra is reviewing the cost allocators which are used in the fixed-line services pricing model (**FLSM**), and is seeking your expert advice to assist it with this review process. Telstra would like you to undertake an expert review of the cost allocation model it has developed, and prepare a report setting out the findings from your review.

Background

The ULLS, LSS, WLR, LCS, PSTN OTA and WADSL are each declared services under Part XIC of the Competition and Consumer Act 2010 (Cth) (**CCA**), and as such certain access obligations apply to these services. Each of these services is also subject to FADs made by the ACCC under section 152BC of the CCA, which specify (among other things) the price terms on which Telstra is to comply with its access obligations for each service.

The current FADs for each of the declared fixed-line services were due to expire on 30 June 2014. The ACCC has therefore commenced an inquiry into making new (replacement) FADs for each of these services, and has proposed to extend the current FADs until such time as the replacement FADs take effect.

Each of the current FADs contain fixed principles provisions, which must be maintained in any replacement FAD, at least until their nominal expiry date. Among the fixed principles set out in the current FADs is the following in relation to cost allocation:

6.14 Cost allocation factors

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(a) The allocation of the costs of operating the PSTN should reflect the relative usage of the network by various services.

(b) Direct costs should be attributed to the service to which they relate.

The cost allocation factors for shared costs should reflect causal relationships between supplying services and incurring costs.

(c) No cost should be allocated more than once to any service

(d) The determination of cost allocation factors should reflect the principles in 6.14 (a) – (c) above except where reliable information is not available to support the application of the principles.

(FAD Allocation Fixed Principles).

Scope of work

We will provide you with:

- a document describing the cost allocation framework that has been developed by Telstra, for use in the FLSM (**Telstra Allocation Framework Document**); and
- the spreadsheets comprising the cost allocation model which Telstra has used to derive the allocators for use in the FLSM (**Telstra Allocation Models**).

We would like you to review the Telstra Allocation Framework Document and Telstra Allocation Models, and prepare a report setting out your expert opinion on the following matters:

- 1 Does the Telstra Allocation Framework Document set out cost allocation principles and methods that are consistent with generally accepted regulatory and accounting cost allocation principles, and with the FAD Allocation Fixed Principles?
- 2 Are the cost allocators utilised in the Telstra Allocation Models consistent with the principles and methods set out in the document Telstra Allocation Framework Document and with generally accepted regulatory and accounting cost allocation principles and with the FAD Allocation Fixed Principles?
- 3 Are the Telstra Allocation Models structured to allocate costs to declared fixed line services in a way that is consistent with:
 - (a) generally accepted regulatory and cost allocation principles;
 - (b) the FAD Allocation Fixed Principles; and
 - (c) the Telstra Allocation Framework document,and do they operate to calculate allocated costs consistent with this structure?

We may ask you to review more than one version of the Telstra Allocation Framework Document and Telstra Allocation Models. If you are asked to review multiple versions, your report should address the last version that you have been provided with.



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Guidelines for preparing your report

The Guidelines for Expert Witness in the Federal Court of Australia are attached to this letter. Telstra is seeking a rigorously prepared independent view which may be used in the context of regulatory decision making and in any subsequent review of the ACCC's final decision. Therefore you are requested to follow the Guidelines to the extent reasonably possible.

In particular, as part of any report please:

- (a) identify your relevant area of expertise and provide a curriculum vitae setting out the details of that expertise;
- (b) only address matters that are within your expertise;
- (c) where you have used factual or data inputs please identify those inputs and the sources;
- (d) if you make assumptions, please identify them as such and confirm that they are in your opinion reasonable assumptions to make;
- (e) if you undertake empirical work, please identify and explain the methods used by you in a manner that is accessible to a person not expert in your field;
- (f) confirm that you have made all the inquiries that you believe are desirable and appropriate and that no matters of significance that you regard as relevant have, to your knowledge, been withheld from your report; and
- (g) please do not provide legal advocacy or argument and please do not use an argumentative tone.

Timing

We require a final report by 4 July 2014.

If you have any questions, please do not hesitate to contact us.

Yours sincerely

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Attachment: Federal Court guidelines for expert witnesses

Practice Note CM 7: Expert witnesses in proceedings in the Federal Court of Australia

Guidelines

1. General Duty to the Court¹

1.1 An expert witness has an overriding duty to assist the Court on matters relevant to the expert's area of expertise.

1.2 An expert witness is not an advocate for a party even when giving testimony that is necessarily evaluative rather than inferential.

1.3 An expert witness's paramount duty is to the Court and not to the person retaining the expert.

2. The Form of the Expert's Report²

2.1 An expert's written report must comply with Rule 23.13 and therefore must

- (a) be signed by the expert who prepared the report; and
- (b) contain an acknowledgement at the beginning of the report that the expert has read, understood and complied with the Practice Note; and
- (c) contain particulars of the training, study or experience by which the expert has acquired specialised knowledge; and
- (d) identify the questions that the expert was asked to address; and
- (e) set out separately each of the factual findings or assumptions on which the expert's opinion is based; and
- (f) set out separately from the factual findings or assumptions each of the expert's opinions; and
- (g) set out the reasons for each of the expert's opinions; and
- (ga) contain an acknowledgment that the expert's opinions are based wholly or substantially on the specialised knowledge mentioned in paragraph (c) above³; and
- (h) comply with the Practice Note.

2.2 At the end of the report the expert should declare that "[the expert] has made all the inquiries that [the expert] believes are desirable and appropriate and that no matters of significance that [the expert] regards as relevant have, to [the expert's] knowledge, been withheld from the Court."

¹The "*Ikarian Reefer*" (1993) 20 FSR 563 at 565-566.

²Rule 23.13.

³See also *Dasreef Pty Limited v Nawaf Hawchar* [2011] HCA 21.



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- 2.3 There should be included in or attached to the report the documents and other materials that the expert has been instructed to consider.
- 2.4 If, after exchange of reports or at any other stage, an expert witness changes the expert's opinion, having read another expert's report or for any other reason, the change should be communicated as soon as practicable (through the party's lawyers) to each party to whom the expert witness's report has been provided and, when appropriate, to the Court⁴.
- 2.5 If an expert's opinion is not fully researched because the expert considers that insufficient data are available, or for any other reason, this must be stated with an indication that the opinion is no more than a provisional one. Where an expert witness who has prepared a report believes that it may be incomplete or inaccurate without some qualification, that qualification must be stated in the report.
- 2.6 The expert should make it clear if a particular question or issue falls outside the relevant field of expertise.
- 2.7 Where an expert's report refers to photographs, plans, calculations, analyses, measurements, survey reports or other extrinsic matter, these must be provided to the opposite party at the same time as the exchange of reports⁵.
3. Experts' Conference
- 3.1 If experts retained by the parties meet at the direction of the Court, it would be improper for an expert to be given, or to accept, instructions not to reach agreement. If, at a meeting directed by the Court, the experts cannot reach agreement about matters of expert opinion, they should specify their reasons for being unable to do so.

J L B ALLSOP
Chief Justice
4 June 2013

⁴ The *"Ikarian Reefer"* [1993] 20 FSR 563 at 565

⁵ The *"Ikarian Reefer"* [1993] 20 FSR 563 at 565-566. See also Ormrod *"Scientific Evidence in Court"* [1968] Crim LR 240

Appendix B: Glossary of terms

ACCC	Australian Competition and Consumer Commission
FADs	Final access determinations
FAD principles	FAD Allocation Fixed Principles
FLSM	Fixed-line services pricing model
Generally Accepted principles	Regulatory and accounting principles set out in KPMG, 14 April 2014, "The key principles underlying regulatory cost allocations"
Gilbert & Tobin	Gilbert & Tobin Lawyers
MOU	Minutes of use
SIO	Services in operation
Telstra Allocation Framework Document or TAFD	Telstra Corporation, July 2014, Cost Allocation Framework for the ACCC Fixed Line Services Model, Framework and Model Guide, Version 1.
Telstra Allocation Models	Telstra Corporation, FLSM Allocation Model Final 23 June 2014.xlsx, received 23 June 2014

Appendix C: References

ACCC, 20 July 2011, as varied 14 December 2011, Final Access Determinations No. 1 to No. 6, pp. 6-7.

Australian Energy Markets Commission, National Electricity Rules, Chapters 6 and 6A

KPMG, 14 April 2014, The key principles underlying regulatory cost allocations

Office of the Tasmanian Economic Regulator, May 2013, Water and Sewerage Accounting Ring fencing Guideline

Telstra Corporation, FLSM Allocation Model Final 23 June 2014.xlsx, received 23 June 2014

Telstra Corporation, July 2014, Cost Allocation Framework for the ACCC Fixed Line Services Model, Framework and Model Guide, Version 1.

Appendix D: Curriculum Vitae



Keith Lockey

Director

KPMG
 147 Collins Street
 Melbourne VIC 3000

Certifications & Professional Memberships

- BSc (Hons) (Environmental Sciences), University of Lancaster
- Institute of Chartered Accountants in England and Wales

Profile/Overview

Keith co-leads KPMG's infrastructure, pricing and economic regulation team. He specialises in advising governments, utilities and other economically regulated industries on matters of industry reform, economic regulation and pricing and funding arrangements. Keith has expertise in undertaking financial analyses and costing to inform the determination of regulated prices and revenues. He has worked almost exclusively in this area since 1995.

Experience – examples

Major Australian telecommunications service provider: Regulatory imputation test – Keith carried out a regulatory imputation test to assess whether charges for third party mobile network access were sufficient to facilitate retail competition. This involved examining cost reports prepared in accordance with regulatory accounting separation requirements, to determine and report on, the relevant costs of service.

Australian Energy Regulator – Review of Cost Allocation Methods (CAMs). Keith assisted the AER to review the CAMS of a number of businesses for compliance with the requirements of the National Electricity Rules and the AER's guidance, and to advise the AER on possible future directions for its accounting separation requirements in the electricity sector.

Office of the Tasmanian Economic Regulator. Keith advised the regulator on the development of a regulatory accounting guideline and reporting templates for the water industry.

National Heavy Vehicle Regulator Project Office – Cost Consultancy. Keith led a team that collected and analysed the forecast costs and supporting assumptions provided by jurisdictions throughout Australia, of implementing arrangements for the national regulation of heavy vehicles.

National Rail Safety Regulator Project Office – Cost and capability study. Keith led a team that assessed the costs and capabilities of jurisdictional rail safety regulators, prior to the formation of a national regulator.

Queensland Competition Authority – Water business price monitoring. Keith led a team that developed templates to collect financial information to assist the QCA with monitoring price and a financial model for analysing that information in accordance with building block principles.

Office of the Tasmanian Energy Regulator: Redesign and simplification of regulatory accounting requirements - Regulatory developments and modifications to the templates led to the need to review Tasmania's regulatory accounting requirements for the electricity distribution industry.

Allgas: Assistance with compliance with regulatory accounting requirements - Keith helped this gas network operator to develop reporting procedures to help demonstrate compliance with regulatory accounting requirements.

Electricity Transmission Network Owners Forum (ETNOF): Transmission cost allocation guidelines 2007 - Keith carried out an engagement for ETNOF (which represents all the principal Australian Electricity Transmission Businesses) to review draft Cost Allocation Guidelines published by the Australian Energy Regulator.

Transend Networks Ltd: AER Cost Allocation Methodology Manual (2007 and 2008) - Keith led a KPMG team that drafted a "Cost Allocation Methodology" required by the Australian Energy Regulator, to demonstrate the allocation of costs between different transmission services in accordance with the National Electricity Rules. KPMG also drafted an accompanying cost allocation and regulatory reporting procedures and process manual to assist Transend.

Transend Networks Ltd: Allocation of shared costs to unregulated business activities - Keith advised on the consistency of an allocation approach developed by Transend with good business practice and regulatory requirements.

Queensland electricity network businesses: Electricity industry regulatory accounting guidelines - Keith was engaged by industry to assess the Queensland Competition Authority's Guidelines published as part of the 2005 Price Determination.

Australian Competition and Consumer Commission: Record Keeping Rules - Keith reviewed draft accounting separation and cost allocation rules (regulatory accounting requirements) for the postal industry drafted by the ACCC and provided a range of suggestions and advice to improve their workability.

Australian Competition and Consumer Commission: Accounting Ring Fencing Guidelines for Gas Transmission Businesses - The Commission engaged Keith to review a jurisdictional regulator's guideline as a basis for accounting ring fencing for gas transmission pipeline service providers, under the Gas Code. Keith was then engaged to draft a guideline. This was designed to allow service providers to meet the Commission's objective of demonstrating compliance with the National Gas Code, while following generally accepted accounting principles and seeking to minimise the regulatory burden for both service providers and the Commission.

Major New Zealand gas distribution and transmission business: Advice on regulatory accounting requirements - Keith assisted a major gas network business to comply with the New Zealand Commerce Commission's Avoided Cost Accounting Method ("ACAM") for regulatory financial reporting.

Department of Infrastructure, Victoria: Development of accounting information reporting requirements for public transport franchisees - Keith was engaged by the Victorian government throughout 2002 and 2003 to identify financial and performance reporting requirements for monitoring and assessing the profit levels of Victoria's public transport franchisees. The outputs of this work included developing and consulting with franchisees on an information requirements guideline.

Transgrid – Negotiated Services Pricing – Keith led a team that developed a model that enabled prices to be calculated on the basis of both standalone and incremental allocations of cost, in accordance with the National Electricity Rules.

Northern Territory Power and Water Corporation: Development of an industry based cost ring fencing guideline - Keith developed a "self-regulating" cost ring fencing guideline.

Office of the Tasmanian Electricity Regulator: Electricity Industry Regulatory Accounting Guidelines - In consultation with regulatees and with regard to the ACCC's proposals for transmission pricing, Keith developed the regulator's original regulatory accounting guidelines for distribution and transmission businesses.

Electricity network businesses throughout Australia: Review of regulatory accounting submission - Keith has been engaged by different electricity networks to review regulatory accounts for compliance with regulatory requirements, prior to submission.

Australian Competition and Consumer Commission: Review of Electricity Transmission Business Co Regulatory Information Guidelines - Keith reviewed and provided constructive advice to the ACCC on proposed regulatory information guidelines to help it

achieve its objectives in a practical, workable way aiming to minimise the information burden on business. Subsequently a small team led by Keith drafted revised Guidelines.

Office of Regulator-General, Victoria ("ORG"): Regulatory management secondment - Shortly after its establishment, Keith was seconded to the ORG for 15 months to: manage and implement the process of acquiring and analyzing regulatory accounts from electricity distribution businesses. This included drafting Issues 1 and 2 of the regulator's cost allocation and regulatory accounting guideline.

Australian Competition and Consumer Commission - Keith organised and participated as a key speaker at a one-day workshop held with the ACCC on regulatory accounting, that explored both issues of principle and practice.

Legal advisors to MurrayLink - benchmarking of efficient forecast business costs - Keith has provided independent expert advice on issues of cost efficiency and allocation key to cost recovery.

CitiPower and Powercor – Independent expert reports on the efficiency of shared costs. Keith authored reports that assessed whether the costs of shared network operating services attributed to each network were prudent and efficient.

Assessment of potential for cross-subsidies in a vertically integrated energy utility - Keith undertook a study that reviewed the potential for economic cross- subsidies both within the utility and with other parties to assist with planning disaggregation options.

Power and Water Authority: Assessment of cost allocations and the bases of CSO payments for electricity supply - Keith advised on appropriate responses to government guidelines on and a regulator's review of, these issues.

Legal advisors the Goldfields Gas Pipeline and the Victorian Gas Transmission System - benchmarking of efficient forecast business costs - Keith provided independent expert advice on issues of cost efficiency and allocation key to access arrangement revisions.

National Transport Commission – Forward Looking Cost Base Discussion Paper – Keith wrote and presented a paper that examined the potential characteristics of how a forward looking cost base could be applied to determine charges for the use of the roads network by heavy vehicles.

Water Utility – Cost allocation and capitalisation. Keith led a small team that developed options for QUU to refine and redevelop its cost allocation and capitalization policies to better meet a range of regulatory, financial reporting and operational objectives.

Legal advisors to Telstra Corporation - Fixed Line Services pricing Model (FLSM). Keith was the joint author of an expert report on the operation integrity and fitness for purpose of the ACCC's FLSM.

Major telecommunications provider - Keith led a KPMG team that undertook economic and financial analysis to help determine whether access prices provide sufficient margins to facilitate competition.

Department of Infrastructure and Transport – Costing of Security ID card provision – Keith led a team that costed service provision.

Appendix E: Telstra Allocation Models – Logical structure

E.1 Introduction

This Appendix sets out in diagrammatic form the logical flow of the allocation calculations that the Expert identified in the Telstra Allocation Models.

The Telstra Cost Allocation Models operate consistently to replicate a method of allocation calculation for an Asset Class:

- across all services to which costs are to be allocated; and
- across each year of the forecast period (2014 to 2019).

Several calculations are common to more than one Asset Class. Accordingly, Table E - 1 indexes the Asset Classes to the sheets in this Appendix which describe the calculation logic.

The Expert also agreed the allocation methods used by the Telstra Allocation Models and described in Appendices E.3 to E.9 to the allocation methods described in the TAFD. Accordingly, Table E - 1 also provides cross references to where each method is described in the TAFD.

In addition:

- forecast service demand is a common input to specific allocator calculations. The calculation of Service demand is summarised at Appendix E.2; and
- Appendix E.2 provides a colour coded key to help interpret the subsequent logic charts.

Table E - 1: Telstra Allocation Models logic - index

Appendix	Description	Corresponding section of TAFD
E.2	Key to colour coding	N/A
E.3	Service Demand	4.3 & 5 (p 17)
E.4	CA01/CA02 for ULLS Bands 1-3, 4	5.1.1 (pp 20-23) & 5.1.2
E.5	CA01 / CA02 for WLR	
E.6	CA03 / CA04 / CA05 CO02 / CO03 / CO11 / CO12	5.1.3 & 5.1.4 & 5.2.2 & 5.2.6 & 5.2.7
E.7	CO01	5.2.1
E.8	CO04	5.2.3
E.9	CO05 / CO06	5.2.4 & 5.2.5
E.10	CA10 / CO10: General Allocators	5.3.2
E.11	CO07 / CO08 / CO09: General Allocators	5.3.1

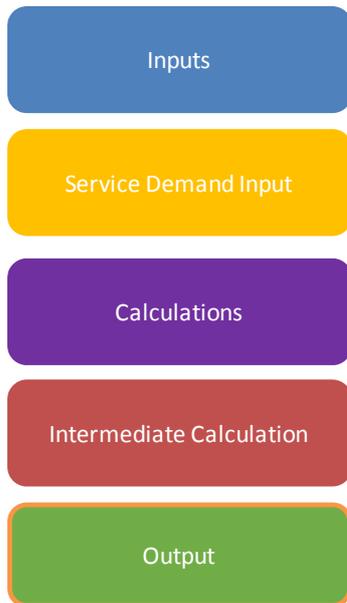
Note: The descriptions of the assets which each asset code (e.g. CA03) represents, can be found in Table 2 and Section 5.1 of the TAFD.

To document the logic, it was necessary for the Expert to assess how the Telstra Allocation Models operate, but this did not necessitate a detailed check of calculations and cells. However,

the findings of more detailed checks which provide additional evidence of how the Telstra Allocation Models operate can be found at Section 5.

E.2 Colour coding and general structure of Telstra Allocation Models

The flow chart logic in Appendices E.3 to E.10 use the following colour coding to denote the different aspects of each allocation calculation.



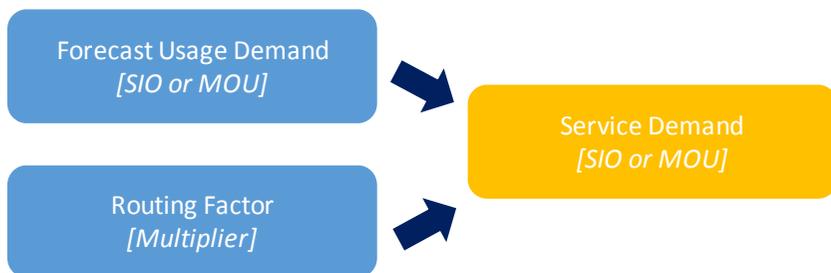
Inputs are data inputs which are recorded in the Allocations sheet of the Telstra Allocation Models.

Service Demand is an input to the specific allocation calculations set out on Sheets 3 to 9. Service demand itself is calculated in the Allocation sheet of the Telstra Allocation Models, using inputs of Forecast Usage Demand and Routing Factors. These inputs are set out in the Input demand and the allocations sheets, respectively of the Telstra Allocation Models.

Calculations and **Intermediate Calculations** are set out in the Allocations sheet of the Telstra Allocation Models.

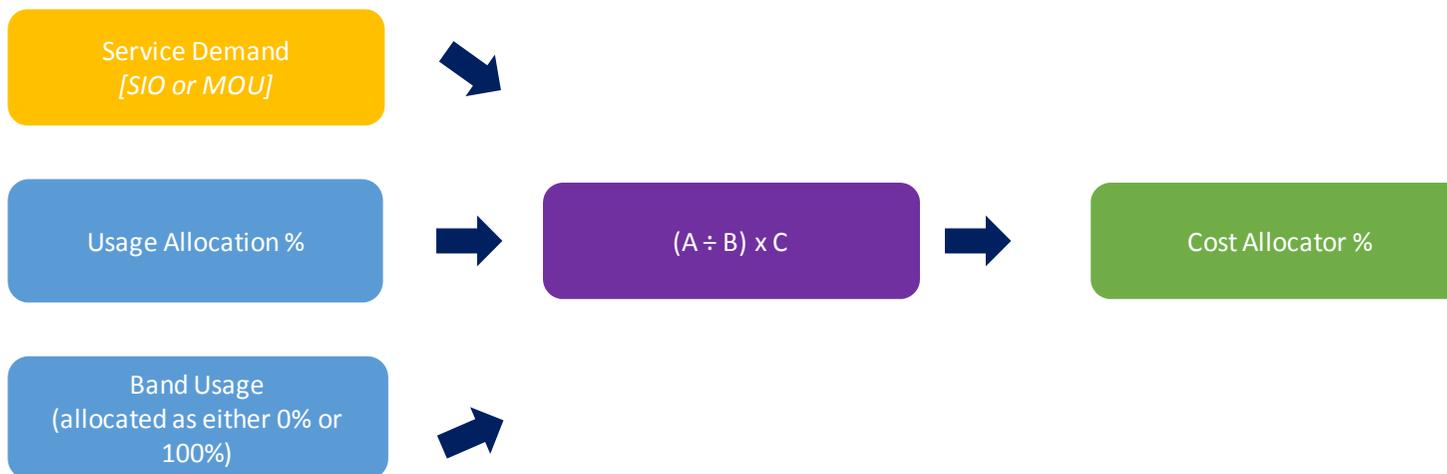
Outputs are the allocation factors which are the results of the preceding inputs and calculations. The Outputs are set out in the Summary Sheet of the Telstra Allocation Models.

E.3 Service Demand (an input to specific allocators)



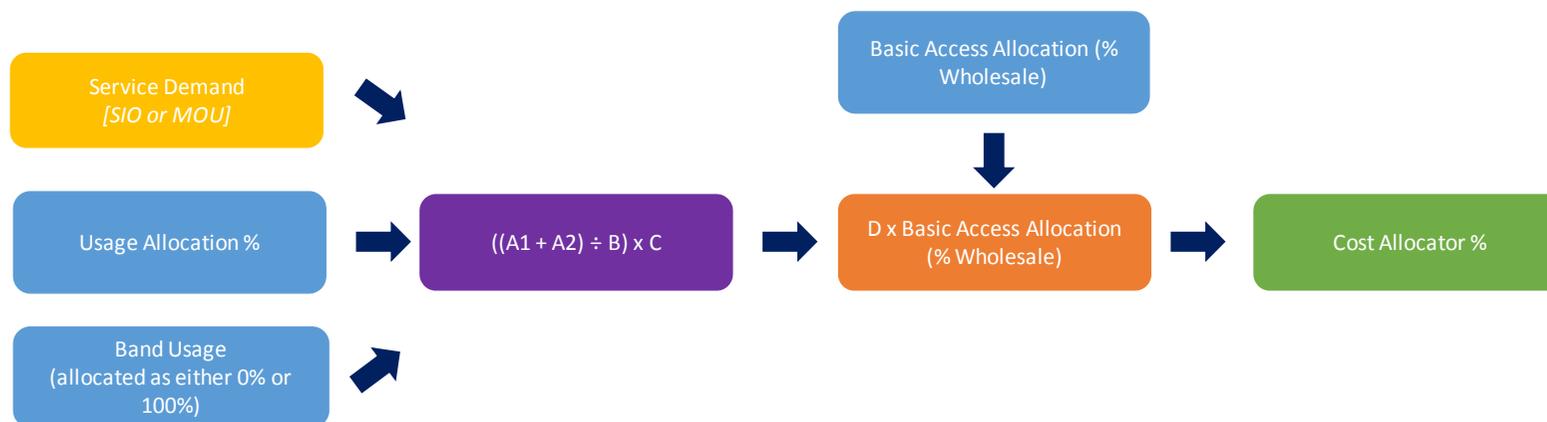
Item	Explanation
Forecast Usage Demand	Forecast demand for a particular fixed line service. The unit of measurement is either SIO or MOU depending upon the nature of the fixed line service.
Routing Factor	<p>Routing factors are used to allocate weights to different fixed line services on the basis that different services place different relative demands on different assets. Accordingly, to reflect this relationship, a routing factor is applied to each service for each network asset.</p> <p>Routing Factors inputs are used to determine which fixed line voice and broadband services are allocated costs for each Asset Class. For fixed line access services as well as for fixed line broadband services the routing factor for a given Asset Class will be set at either "1" or "0" (indicated as "-"). Where the routing factors are applied to fixed line voice services, the calculated routing factor may be "1", "0" or some other positive number, calculated in a separate Routing Factor Model. Routing factors for the fixed line voice services will vary depending on the estimated relative load the particular service places on an Asset Class, as calculated by the Routing Factor Model.</p>
Service Demand	Forecast Usage Demand x Routing Factor

E.4 CA01 / CA02 for ULLS Bands 1-3, 4



Item	Explanation
A	Service Demand for a fixed line service in a particular Band (1, 2, 3 or 4) for which the Cost Allocator is being determined
B	Σ Service Demand for each applicable fixed line service for a particular Band (1, 2, 3 or 4) for that fixed line service
C	Usage Allocation % for a particular Band (1, 2, 3 or 4)

E.5 CA01 / CA02 for WLR



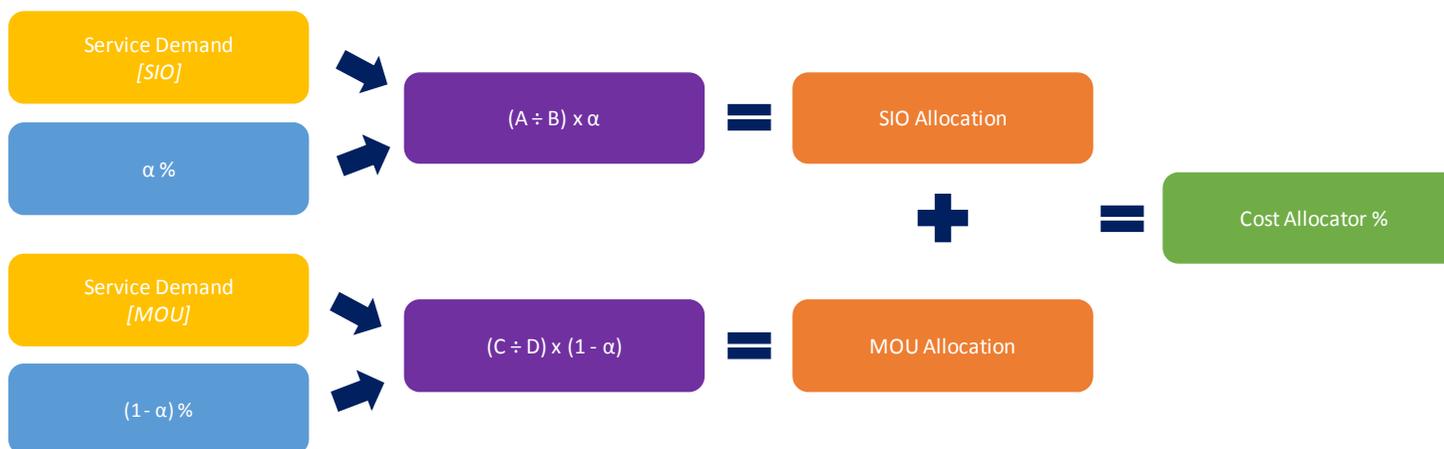
Item	Explanation
A1	Service Demand for PSTN Retail Access service in a particular Band (1, 2, 3 or 4)
A2	Service Demand for WLR service in a particular Band (1, 2, 3 or 4)
B	Σ Service Demand for each applicable fixed line service for a particular Band (1, 2,3 or 4) for that fixed line service
C	Usage Allocation % for a particular Band (1, 2, 3 or 4)
D	$\Sigma((A1 + A2) \div B \times C)$ For each of Bands 1, 2, 3 & 4
Basic Access Allocation (% Wholesale)	(Forecast Usage Demand for WLR) \div (Forecast Usage Demand for PSTN Retail Access service + Forecast Usage Demand for WLR)

E.6 CA03 / CA04 / CA05 / CA06/ CA07 / CA08 / CA 09, CO02 / CO03 / CO11 / CO12



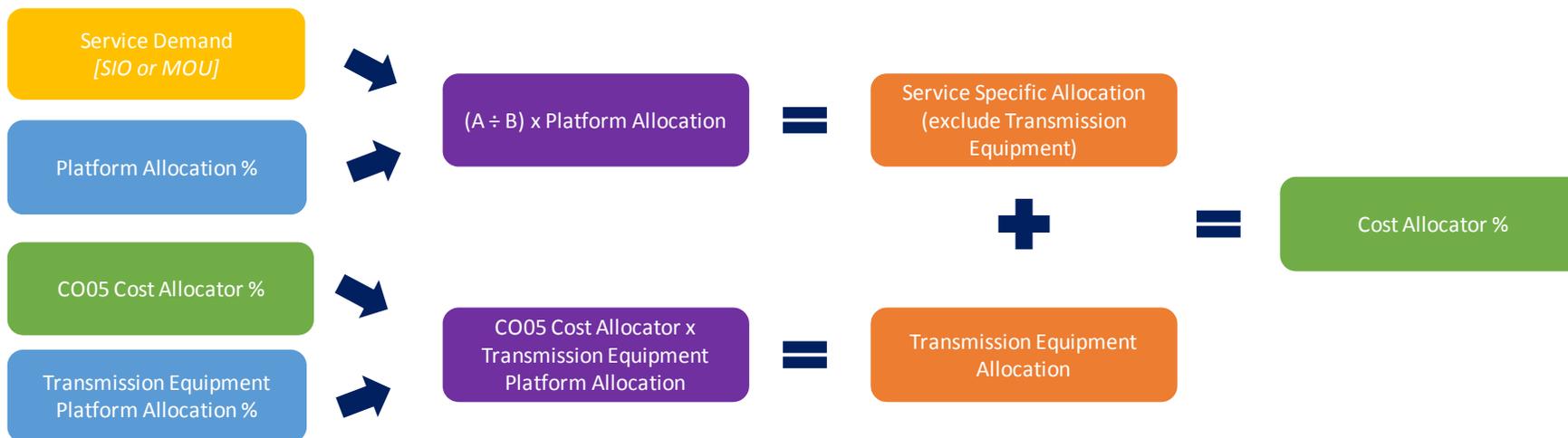
Item	Explanation
A	Service Demand for the fixed line service for which the Cost Allocator is being determined
B	Σ Service Demand for each applicable fixed line service

E.7 CO01



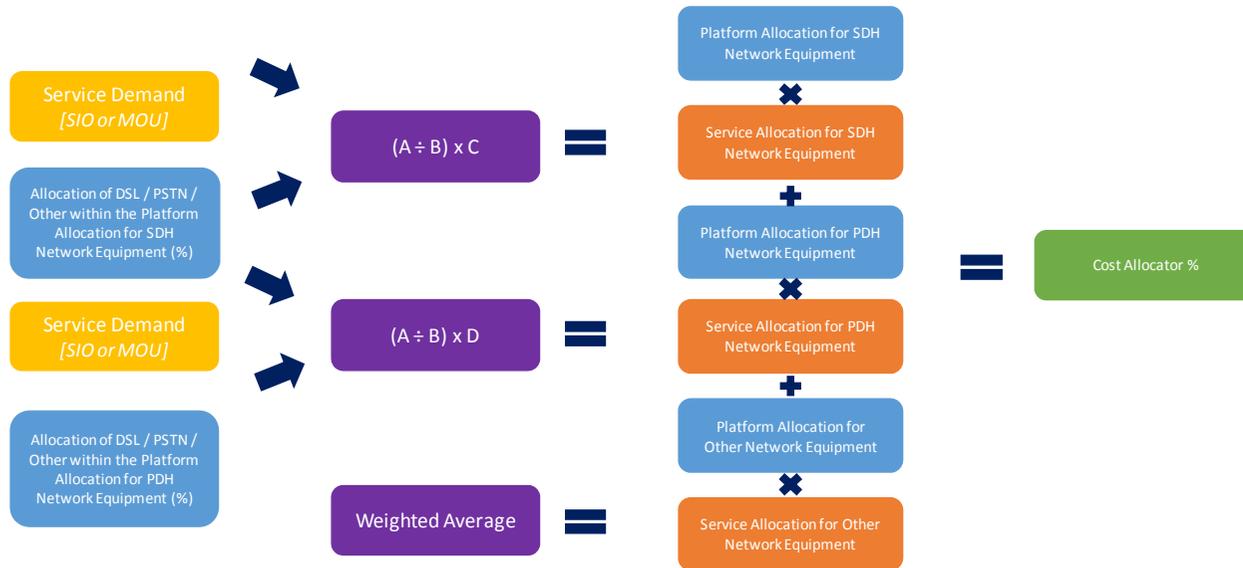
Item	Explanation
α and $(1 - \alpha)$	α is the proportion of CO01 for which cost is determined by the number of end user services (measured by SIO) and $(1 - \alpha)$ is the proportion of CO01 for which cost is determined by the level of usage of connected end users (measured by MOU)
A	Service Demand for the fixed line access service (which has usage measured by SIO) for which the Cost Allocator is being determined
B	Σ Service Demand for each applicable fixed line access service (which has usage measured by SIO)
C	Service Demand for the fixed line voice service (which has usage measured by MOU) for which the Cost Allocator is being determined
D	Σ Service Demand for each applicable fixed line voice service (which has usage measured by MOU)
SIO Allocation	For fixed line access services that have usage measured by MOU (e.g. LCS) the SIO Allocation will not apply
MOU Allocation	For fixed line services that have usage measured by SIO (e.g. WLR), the MOU Allocation will not apply

E.8 CO04



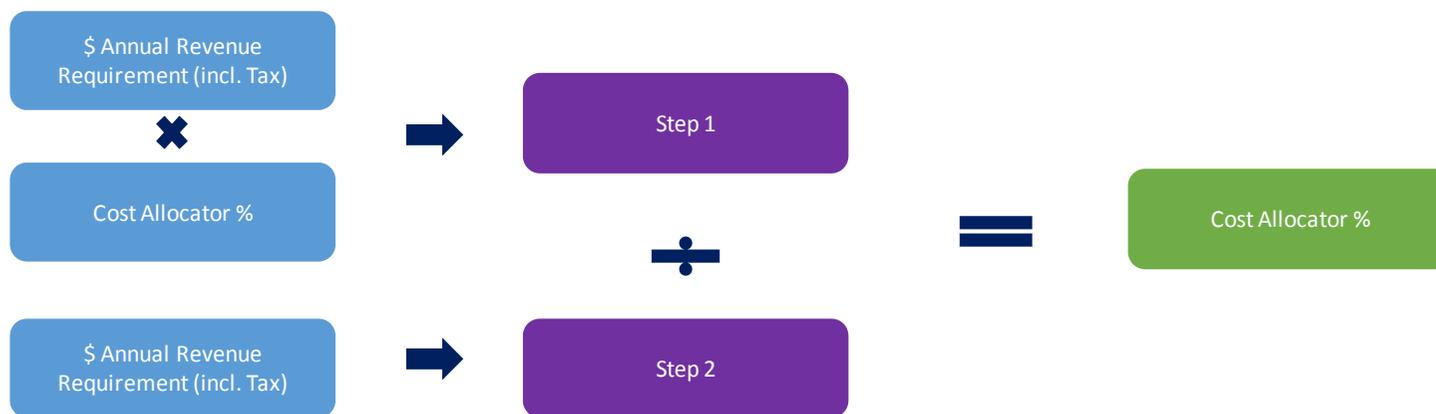
Item	Explanation
A	Service Demand for a particular fixed line service for which the Cost Allocator is being determined
B	Σ Service Demand for each applicable fixed line service
Platform Allocation	Where the fixed line service for which the Cost Allocator is being determined is a PSTN based service, then the Platform Allocation will be the PSTN Platform Allocation. Where the fixed line service for which the Cost Allocator is being determined is a DSL based service, then the Platform Allocation will be the DSL Platform Allocation.

E.9 CO05 / CO06



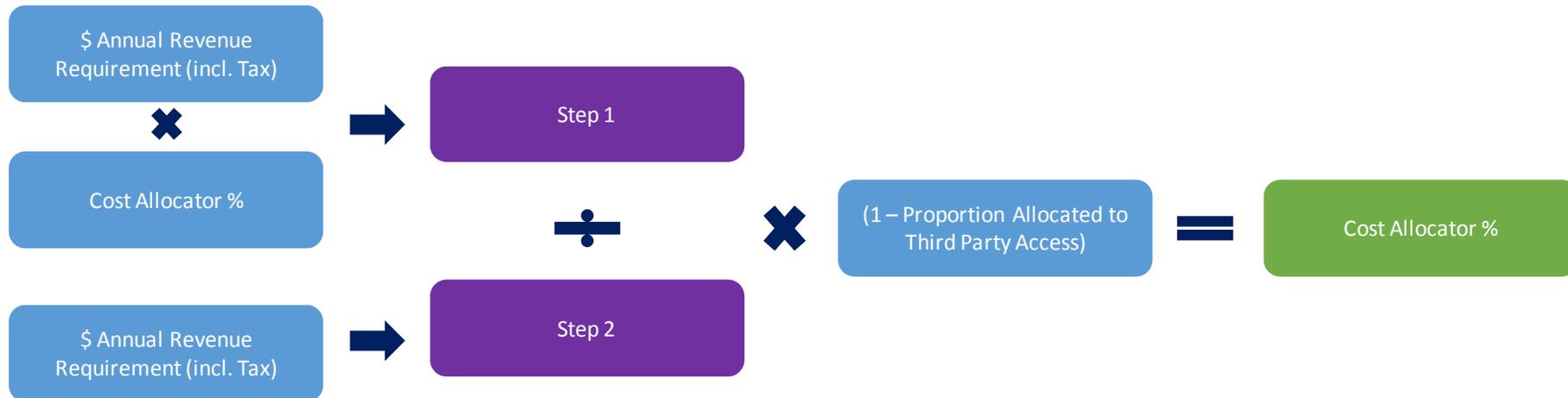
Item	Explanation
A	Service Demand for the fixed line service for which the Cost Allocator is being determined
B	<ul style="list-style-type: none"> Where the fixed line service in A is a PSTN based service, then $B = \sum$ Service Demand for each applicable PSTN based fixed line service Where the fixed line service in A is a DSL based service, then $B = \sum$ Service Demand for each applicable DSL based fixed line service
C	<ul style="list-style-type: none"> Where the fixed line service in A is a PSTN based service, then C = Allocation of PSTN within the Platform Allocation for SDH Network Equipment Where the fixed line service in A is a DSL based service, then C = Allocation of DSL within the Platform Allocation for SDH Network Equipment
D	<ul style="list-style-type: none"> Where the fixed line service in A is a PSTN based service, then D = Allocation of PSTN within the Platform Allocation for PDH Network Equipment Where the fixed line service in A is a DSL based service, then D = Allocation of DSL within the Platform Allocation for PDH Network Equipment
Weighted Average	Weighted average of $(A \div B) \times C$ and $(A \div B) \times D$; weighted by the Platform Allocation for SDH Network Equipment for $(A \div B) \times C$ and the Platform Allocation for PDH Network Equipment for $(A \div B) \times D$

E.10 CA10 / CO10: General Allocators



Item	Explanation
Step 1 for CA10	Σ The direct network asset cost for a particular service for each of CAN Asset Classes CA01 to CA09
Step 2 for CA10	Σ The annual revenue requirement for each of CAN Asset Classes CA01 to CA09
Step 1 for CO10	Σ The direct network asset cost for a particular service for each of Core Asset Classes CO01 to CO09 and CO12
Step 2 for CO10	Σ The annual revenue requirement for each of Core Asset Classes CO01 to CO09 and CO12

E.11 CO07 / CO08 / CO09: General Allocators



Item	Explanation
Step 1	Σ The direct network asset cost for a particular service is calculated for each of Core Asset Classes CO01 to CO06 and CO12
Step 2	Σ The annual revenue requirement for each of Core Asset Classes CO01 to CO06 and CO12
Proportion Allocated to Third Party Access	This number represents the fact that these assets, in addition to being used to support Telstra's supplied retail and wholesale services, are also accessed and used by third parties.

Appendix F: Details of specific allocation calculation checks

Table F - 1 records the specific checks of calculations and logic, described in Sections 5.3 and 5.3.1.

Appendix E explains the logical structure of each calculation that has been checked. The first column of Table F - 1 refers to the relevant sections of Appendix E and demonstrates that each method of calculation in Appendix E has been checked.

The second column of Table F - 1 specifies the outputs whose calculation has been checked. The third and fourth columns set out the data inputs and calculations based on those inputs which agree to the values in the output cells (in the second column).

Sections 5.3 and 5.3.2 also explain how the Expert has determined that the logic which has been checked has been applied throughout the Allocations spreadsheet.

Table F - 1: Arithmetic checks

