Accounting Separation

A Consultation paper on Accounting Separation and Costing Methodologies

2 June 2004

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1. Executive Summary

Jersey has been in the process of liberalising its telecommunications market. The transition from exclusive privilege to a regulated, competitive environment, with a clear distinction between regulated and unregulated business, has to be accompanied by changes in the way in which financial information is analysed and reported.

Jersey Telecom Limited ("JT Ltd") is currently the dominant supplier of telecommunications services in Jersey and has been determined to have Significant Market Power ("SMP"). JT Ltd is required to submit Regulatory Accounts to the JCRA in accordance with condition 29 of its Licence. In November 2002, the JCRA published Regulatory Accounting Guidelines which set out the JCRA's requirements for accounting separation, including a detailed specification of the format of the returns that JT Ltd was required to make.

The purpose of this consultation paper is to review the options, outline a strategy and establish a timetable for the implementation of appropriate cost accounting systems, as applied to JT Ltd (and other licensees with Significant Market Power).

Regulatory Accounts are fundamental to the regulator's tool kit and are prepared in order to provide financial information about regulated businesses for use by the regulator, the industry and other stakeholders. Regulatory accounts requires that the regulated operator's activities are split for accounting purposes into separate businesses and specifies how financial accounting information should be collected and reported.

Regulatory accounts differ from traditional financial accounts in that they focus on the costs and revenues that accrue from the regulated business activities. Importantly, they provide a greater degree of detail at the product and service level and therefore enable the JCRA to monitor and act to prevent problems.

The JCRA has had regard to best practice. The production of Regulatory Accounts contributes to overall market certainty and transparency, and the JCRA's policy is to keep the cost of regulation to a minimum and will thus endeavour at all times to ensure that this is achieved. The JCRA suggests that JT Ltd should prepare and supply separated accounts for each of its licensed business activities together with various supporting statements and a certificate from its Board of Directors.

Subject to comments received in this consultation process, the JCRA intends to issue an Accounting Separation Direction, which would require JT Ltd to produce the first set of regulatory accounts by 30 June 2005 for the financial year 31 December 2004, and annually to the same timetable thereafter.

To assist in this work, the JCRA invites submissions from interested parties on the matters referred to in this document concerning the development of cost-based accounting systems in the telecommunications sector in Jersey.

2. Introduction and context

At the moment, JT Ltd is the dominant supplier of telecommunications services in the Island of Jersey and has been determined to have Significant Market Power ("SMP"). The move by JT Ltd from the possession of an exclusive privilege in telecommunications under the 1972 Law, to a regulated, competitive environment, with a clear distinction between regulated and unregulated business, has to be accompanied by changes in the way in which financial information is analysed, specifically for regulatory purposes.

The purpose of accounting separation is to provide an analysis of information derived from accounting records to reflect as closely as possible the performance of parts of the business as if they had operated as separate businesses.

As part of the regulatory framework set out in the Telecommunications (Jersey) Law 2002, the JCRA has a duty to ensure:

- Promotion of competition, where appropriate, within the Jersey telecommunications market;
- The promotion of efficiency, economy and effectiveness in commercial activities connected with telecommunications in Jersey; and
- Further the economic interests of Jersey;
- that dominant players in the Jersey telecommunications market do not abuse their market position by adopting anti-competitive practices such as predatory pricing and cross-subsidizing strategies.

In order for the JCRA to foster competition and economy and effectiveness and monitor the dominant company's behaviour in the market, the JCRA requires a significant amount of financial information, and a key source of such information is the set of separated regulatory accounts that a dominant operator may be required to keep under the Licence terms and conditions published by the JCRA.

As JT Ltd has been found by the JCRA to be dominant in both fixed and mobile telecommunications markets in Jersey[1], a situation which is unusual in most jurisdictions, the JCRA has provided JT Ltd with Guidelines on how to prepare separated regulatory accounts. Whilst these Guidelines are specific to JT Ltd and accommodate the company's network design and set of services, the principles within the document are generic and will be applied to any other operators deemed to be dominant in a relevant market, in which case similar Guidelines will be drawn up for any such operator and will be tailored to that operator accordingly.

The JCRA's Guidelines to JT Ltd are based on best practice and benefit from the considerable amount of international experience and research in the development of separated accounts. In addition, the EU has published the most comprehensive set of guidelines on accounting separation, which are set out in the *Commission of the European Communities Recommendation of 8 April 1998 on interconnection in a liberalized telecommunications market, Part 2 – Accounting separation and cost accounting*.

Separated accounts provide the licensee with a framework within which to collect, assess and evaluate information, reducing ad hoc requests for information and allowing for the staged planning

[1] JCRA consultation paper "Telecommunications Market Dominance 2004/1"

of the workload involved in their production. They provide the regulator with predictable and valuable information with which to carry out its functions.

From the information received from JT Ltd, JT Ltd has informed the JCRA that it has introduced a new accounting system ("Metify")[2], which is able to produce product costing and pricing by the fully-allocated costing approach and which provides details of product profitability. Through the introduction of a product and service costing model, JT Ltd have assured the JCRA that the Metify system will be able to separate costs between access and core network; access retail; and other retail and disaggregated services, as well as being able to manage transfer charges in terms of both total and unit costs between the network elements.

In addition, it will support the setting of retail and wholesale tariffs, support the provision of information for regulatory purposes and assist management in understanding cost drivers and managing costs and profitability.

2.1. What is 'Accounting Separation' and why is it used?

Telecommunications operators typically operate vertically integrated businesses, with the various business activities having relationships between, or dependencies upon, each other. JT Ltd operates in this manner.

When competition is introduced to a market such as Jersey, where the incumbent operator has enjoyed a *de facto* monopoly for many years, it becomes necessary to make visible the relationships between the various business activities contained within the overall integrated business of the incumbent. This is to ensure that the dealings between the business activities of the incumbent's business are on the same basis as dealings between the incumbent and its competitors.

There are typically two approaches to the issue:

a) to seek the physical separation of the business activities, (known as structural separation); and
b) to separate the business activities only for accounting purposes, (known as accounting separation).

Owing to the relative cost and difficulty of achieving structural separation, Jersey, in common with most jurisdictions, has chosen to seek only accounting separation in the first instance.

Accounting separation must yield a detailed analysis of information derived from financial records to reflect, as closely as possible, the performance of separate business activities that may be operated by a single integrated entity.

Accounting separation requires enhanced transparency in the accounting arrangements of operators that are determined to be dominant and/or to have SMP in defined markets. JT Ltd has been determined to be dominant and to hold SMP in various markets.

This separation of information comes into particular focus in determining the rates that may be fairly charged by the dominant or SMP operator to competitors that seek to interconnect with or gain access to its network. These areas are pivotal to the development of competition in

[2] c. 2000

telecommunications markets.

Separated or regulatory accounts are prepared in order to provide financial information about regulated businesses for use by the regulator, the industry, consumers and other stakeholders. They provide information that is more focused than that contained in statutory accounts as they relate to the regulated businesses or activities, whereas statutory accounts relate to the regulated company as a whole, could include non-regulated activities, and are more focused on the requirements of investors only.

Regulatory accounts may assist regulation in a variety of ways, depending on the market structure and regulatory emphasis, including (inter alia):

- Monitoring performance against the assumptions underlying a current price control for retail and wholesale services;
- Informing future price controls for both retail and wholesale services;
- Informing decisions regarding the level of interconnection rates; and
- Assisting in the detection (or verification of the absence) of certain anti-competitive behaviour such as unfair cross-subsidisation and undue discrimination at levels of disaggregation appropriate to the relevant retail and wholesale markets.

Q1. *Do consultees believe that separated accounts assist in regulation of the telecommunications market in Jersey?*

2.2. Relevant Licence conditions

JT Ltd's Licence includes requirements, as a dominant operator in the fixed and mobile markets, to keep separate financial accounts in such form and at such a level to enable the JCRA to assess whether it is complying with its Licence conditions with respect to, for example, interconnection and fair competition.

To assist JT Ltd, the JCRA published in November 2002 *Regulatory Accounting Guidelines* ("The Guidelines"). These set out the JCRA's detailed requirements for the preparation of separated accounts for regulatory scrutiny. The Guidelines are subject to review and may be revised by the JCRA in the light of experience. In addition, the submission of separated regulatory accounts by JT Ltd does not prejudice the JCRA's right to seek and obtain any other information it requires to fulfil its statutory duties.

The terms of individual Licences that have been issued to JT Ltd and others provide for the following:

<u>JT Ltd's Licence condition 29.1</u>

'Within six (6) months of the Licence Commencement Date, the Licensee shall confirm to the JCRA that it maintains accounting records in a form that enables the activities specified in any direction given by the JCRA to be separately identifiable, and which the JCRA considers to show and explain the transactions of each of those activities'.

JT Ltd's Licence condition 29.2

'The JCRA may require reports on the accounting records and/or activities from time to time. The JCRA may direct the Licensee as to the basis and timing of such reports as the JCRA may require'.

These conditions enable the JCRA to identify all elements of cost and revenue, with the basis of their calculation and the detailed attribution of methods used, related to such Licensed telecommunications activities.

The JCRA may require the Licensee to submit any other accounting information it may require in order to effectively supervise and enforce the terms of this Licence and the provisions of the Telecommunications (Jersey) Law 2002 and regulations issued thereunder.

If the Licensee fails to comply with its obligations under relevant sections, or if the accounting system presented by the Licensee fails to achieve the objectives set forth in these subsections, and the JCRA deems it necessary and appropriate in accordance with the provisions of either Articles 18 or Artic1e 19 of the Telecommunications (Jersey) Law 2002, the JCRA may order the Licensee to implement structural separation within a period to be determined by the JCRA.

2.3. Structural Separation

Structural separation means the division of the integrated telecommunications business of a Licensee into two or more separate legal entities so that each entity independently performs distinct Licensed telecommunications activities and owns and has day-to-day control of the assets and operational capabilities, including employees, by means of which such activities are carried out.

In a small market such as Jersey, the imposition of structural separation could result in significant inefficiencies, with central functions having to be duplicated, and extra resources having to be used to manage intra-operator billing.

Q2. Do consultees agree that structural separation of the Licensee's divisions could lead to inefficiencies?

2.4. Nature of the consultation process

This consultation sets out issues associated with the achievement of accounting separation for Jersey Telecom and prompts comments on various issues that influence the approach that may be adopted, including costing methodologies. Comment may be made, in writing, on any element of the consultation document. The JCRA will not, however, generally enter into correspondence relating to comments made.

2.5. No conflict with Law or Licences

This consultation document seeks to address matters in straightforward terms. It makes reference to the Telecommunications (Jersey) Law 2002 and to Licences to be issued under the terms of that Law.

Nothing in this consultation shall be construed to conflict with, or amend, the Telecommunications (Jersey) Law 2002 or Licences issued under its terms.

3. Appropriate Level of Accounting Separation

This section sets out the level of disaggregation that the JCRA believes is required for JT Ltd's separated accounts. The preparation and submission of sufficiently detailed financial information to the JCRA will increase transparency and demonstrate that there is no cross subsidisation between JT Ltd's activities as a dominant operator.

Based on consideration of best practice and the EU recommendations, the JCRA proposes that JT Ltd prepares separate accounting information for the following main business areas[3]:-

a) Core Network;
b) Local Access Network;
c) Retail;
d) Mobile;
e) ISP Services; and
f) Other Activities.

International experience has demonstrated that the preparation of accounts for the disaggregated activities of these main business areas further increases transparency and assures the regulator and other operators that there is no discrimination in the provision of services to the dominant operator's own retail arm and other operators. It should be noted that this requirement identifies the main categories that the JCRA considers appropriate at this time, but it reserves the right to require JT Ltd to separate out any of its activities as may be designated at any point in the future.

The JCRA recommends that JT Ltd presents the disaggregation of its business activities in the following format:

1) Consolidated Separated Accounts

  a) Core Network;
  b) Local Access Network;
  c) Retail Fixed:

    i) Retail – Exchange line rental and connection;
    ii) Retail - Local calls;
    iii) Retail - Guernsey calls;
    iv) Retail - National calls;
    v) Retail – International Calls;
    vi) Retail – Calls to Jersey Mobiles;
    vii) Retail – Non-geographic calls free to calling customer;
    viii) Retail – Non-geographic calls charged at local rate;
    ix) Retail – Non-geographic calls charged at national rate;
    x) Retail – Non-geographic calls charged at premium rate;
    xi) Retail – leased lines;
    xii) Retail – Internet;

[3] Definitions of each of these business areas are provided in Section 4. These definitions are based on those set out in the *EU Commission Recommendation of 8th April 1998 on interconnection in a liberalised telecommunications market Part 2 – Accounting separation and cost accounting*.

xiii) Retail – Directory Enquiries.
xiv) Retail – Public Payphones;
xv) Retail – Leased lines (private circuits);
xvi) Retail – Remaining activities.

d) Broadband
(i) xDSL;
(ii) Other.

e) Mobile:

(i) Access Network;
(ii) Retail;

i) Retail – Connection;
ii) Retail - Rentals;
iii) Retail - Prepaid sales;
iv) Retail - Guernsey calls;
v) Retail – Calls from Mobile;
vi) Retail – Calls to Mobile;
vii) Retail – SMS / Data;
viii) Retail – Roaming;
ix) Retail – Internet ;
x) Retail – Directory Enquiries;
xi) Others (MMS, GPRS Services).

f) Other Activities, for example:

a) Retail sales;
b) ISP Services;
c) Network cabling.

Annex 1 provides full definitions for the disaggregated Retail activities specified above.

The JCRA wishes to follow best practice[4] and recommends that reconciliations between the separated accounts and the statutory accounts should be provided. As such, JT Ltd will need to consolidate the accounts of the main business areas into a summarised set of accounts (the Consolidated Separated Accounts) and to submit reconciliation statements in conjunction with the accounts. The JCRA proposes that JT Ltd will need to prepare reconciliations[5] between:

- JT Ltd's statutory accounts and the Consolidated Separated Accounts of the main business areas;
- the Consolidated Separated Accounts and the Accounts of the main business areas (i.e. Core Network, Local Access Network, Retail, Mobile and other activities);
- the Accounts of the main business areas and their disaggregated activities where applicable

[4] i.e. the EU Commission Recommendation of 8th April 1998 on interconnection in a liberalised telecommunications market Part 2 – Accounting separation and cost accounting
[5] The reconciliations will need to be independently verified and the role of auditors in the preparation of JT's Regulated Accounts is set out in Section 7.

(i.e. at present this only relates to the Retail business and, therefore, items (i) to (xvi) will need to be reconciled back to the Retail main business accounts).

- These reconciliations should also apply to any of JT Ltd's subsidiaries.

Q3. Do consultees agree that JT Ltd should be required to account for each Licensed activity separately or whether certain smaller businesses might be aggregated with larger businesses for accounting purposes?

Q4. If the latter is to apply, which Licensed business activities should be considered for aggregation? For instance, should accounting separation be limited to areas where a Licensee has significant market power or is dominant?

Q5. Do consultees agree that subsidiary companies of JT Ltd should also be subject to the same principles of accounting separation?

Q6. Comment is invited as to whether the level of disaggregation for accounting purposes is adequate for the determination of mobile termination costs.

3.1. Fixed services

With specific regard to JT Ltd, competitors such as Newtel Ltd and Cable & Wireless Jersey Ltd must rely upon interconnect relationships with JT Ltd, which controls (and is likely to continue to control) access to users of fixed services in Jersey and to an extensive range of assets and facilities.

It follows that the JCRA must require JT Ltd to account separately for activities even below the Licensed activity level within its fixed services business, in order that the JCRA may, amongst other things,

a) gain a proper understanding of the asset and operating cost structure of JT Ltd;
b) satisfy itself that JT Ltd deals with its competitors on no worse terms that it does with its own separate activities or functions; and,
c) ensure that all tariffs for all services are fair and equitable, non-discriminatory and based on forward-looking costs.

4. Definition of Licensed activities and disaggregated elements

This section of the consultation provides an explanation of the activities that are Licensed and of the disaggregated activities that have been considered in section 3. Each of the areas and activities, as more fully defined in Licences, are candidates for accounting separation.

Descriptions are provided, in brief, for the convenience of the reader. Nothing in this document should be construed as being in any way intended to amend, or conflict with, the Telecommunications (Jersey) Law 2002 or Licences and regulations to be issued under its terms.

4.1. Fixed services

The Licensee is authorized, on a non-exclusive basis, to provide by means of its fixed telecommunications network the following licensed services in the licensed area:

a) fixed telecommunications services; and
b) public payphones.

'Fixed telecommunications services' means any basic data service or basic voice service other than an international telecommunications service or mobile service.

4.2. International facilities

The Licensee is authorised, on a non-exclusive basis, to install, operate and manage its international telecommunications facilities in the Licensed area. The Licensee is authorised to connect its international telecommunications facilities to:

a) any telecommunications network operated under a telecommunications Licence; and
b) any telecommunications equipment approved for connection in accordance with Article 21 of the Telecommunications (Jersey) Law 2002 and any regulations issued pursuant to the Telecommunications (Jersey) Law 2002.

International telecommunications facilities means any other telecommunications facilities used or intended for use in connecting Jersey to other countries for the provision of international telecommunications service.

4.3. International services

The Licensee is authorised, on a non-exclusive basis, to provide international telecommunications services by means of a public telecommunications network in the Licensed area.

"International telecommunications services" means the provision of telecommunications services between Jersey and other countries.

4.4. Mobile Telecommunications

The Licensee is authorised, on a non-exclusive basis, to provide telecommunications services by means of a public telecommunications network in the Licensed area.

The mobile telecommunications service means any basic data service or basic voice service provided by means of GSM mobile radio communications (including international telecommunications services) and shall also include the provision of third generation services.

4.5. Internet service provision

The licensee is authorised on a non-exclusive basis to provide internet services in the licensed area but as this is not considered to be part of the core regulated business, there is a requirement for a clearer separation of this business to be demonstrated in the accounts.

'Internet services' means services provided to the public whose provision consists of subscriber interaction with the Internet or the transmission of information to or over the Internet.

4.6. Wholesale

The offering of core network products such as leased lines, interconnect and number portability at cost-oriented prices to other telecoms operators.

4.7. Disaggregated activities under the fixed services Licence

4.7.1. Core network

A core network business activity provides a range of interconnection services internally and externally in order to allow the customer of one Licensee to communicate with customers of the same or another Licensee, or to access services provided by another Licensee. These services include the switching and conveyance of communications traffic.

4.7.2. Local access network services

A local access network service provides connections to the core network. For accounting separation purposes the local access network services will recognise all customer-dedicated components of the network, including line cards and ports at concentrators and exchanges. All other network elements represent the core network.

4.7.3. Retail telephony

The IT retail telephony business encompasses the sale of basic data and voice services to end-users, together with leased lines, payphones and the provision of directory information services.

4.7.4. Broadband

A transmission medium capable of supporting a wide range of frequencies; can carry multiple signals by dividing the total capacity of the medium into multiple, independent bandwidth channels, where each channel operates only on a specific range of frequencies; used originally to describe a channel with more bandwidth than a standard 4 KHz voice grade channel.

4.7.5. Other activities

This classification captures all other non-licensed such as retail sales, ISP services and network cabling activities.

4.7.6. Transfer charges

The JCRA believes that business activities that are licensed to JT Ltd should have clear separate boundaries of operation. However, the majority, if not all, of the business activities have a relationship or dependency upon the fixed services business of JT Ltd; in other words JT Ltd must supply its separate Licensed businesses with services, in addition to supplying services to its competitors and customers. Similarly disaggregation gives rise to the supply of services from one part of the fixed services business to another. For example, the retail activity must normally acquire services from the core network services activity.

The JCRA recommends that JT Ltd establishes a transfer charging system.

The JCRA is of the view that any transfer charging system based transactions must be separately reported by JT Ltd and that the charge for any service/product within JT Ltd should be equivalent to the charge that would be levied if the product of service were sold externally rather than internally. This rule to apply regardless of whether the service/product is, at any particular point in time, actually supplied externally.

A more detailed analysis of the subject is given in 6.5

Q7. Comment is invited in relation to the principles to be applied to transfer charges. In particular, views are sought on any alternative approach to the issue of transactions that JT Ltd are involved in.

5. Principles governing accounting separation statements to be prepared by JT Ltd

This section sets out the principles, based on best practice, which the JCRA believes JT Ltd should follow in order to allocate costs, capital employed and revenues for the purposes of preparing separate accounts. The application of these principles to operating costs, capital employed and revenues is considered in more detail in Annexes 2, 3 and 4 respectively.

These principles may also be relevant to the determination of interconnection charges for unbundled interconnection services, for which purpose the costing systems will need to be sufficiently detailed to permit, as far as possible, the allocation of costs to unbundled network components.

The JCRA considers that the following principles should apply when preparing separated regulatory accounts:

Accounting separation should be based on the principle of causation: that is, costs[6] and revenues should be allocated to those services or products that cause those costs or revenues to arise. This requires the implementation of appropriate and detailed cost allocation methodologies. In practice, this means that JT Ltd would need to:

- Review each item of cost, capital employed and revenue;
- Establish the driver that caused each item to arise; and
- Use the driver to allocate each item to individual businesses.

All allocations may be subject to review by the JCRA.

The JCRA acknowledges that JT Ltd has already introduced Activity Based Costing (ABC) which enables cost causality to be determined, and can indicate where there may be cross-subsidisation between products and service areas.

Figure 1 (page 18) illustrates a typical cost allocation process. It should be noted that actual allocation processes may vary depending on the entity's organisational structure and the way(s) in which financial/operating data are captured, and may be more complex and involved than Figure 1 implies. It is important to note, however, that the ultimate aim of allocating costs is the same.

The process starts from information and data captured by the general ledger or other costing or financial systems operated by the company. The costing information held by these systems may be divided between operating costs, capital costs and accounting entries such as depreciation.

Costs may be attributed either directly to services or to cost pools called network components, related functions or other functions. These are defined as follows:

[6] Including operating and capital costs.

5.1. Services

These are the costs that can be directly identified with a particular service. For these purposes, the term "service" refers both to end-user services (e.g. the provision of pay-phones) and intermediate services (e.g. network services).

5.2. Network components

This pool contains the costs relating to the various components of transmission, switching and other network plant and systems. The costs will be in respect of network components that cannot be attributed directly to a particular service as they are utilised in the provision of a number of services.

5.3. Related functions

This pool contains the costs of functions necessary for the provision of services to the customer such as billing, maintenance, and customer services.

5.4. Other functions

This pool contains the costs of functions that are not related to the provision of particular services but are an important part of the operations of the company. Examples of such costs include planning, personnel and general finance.

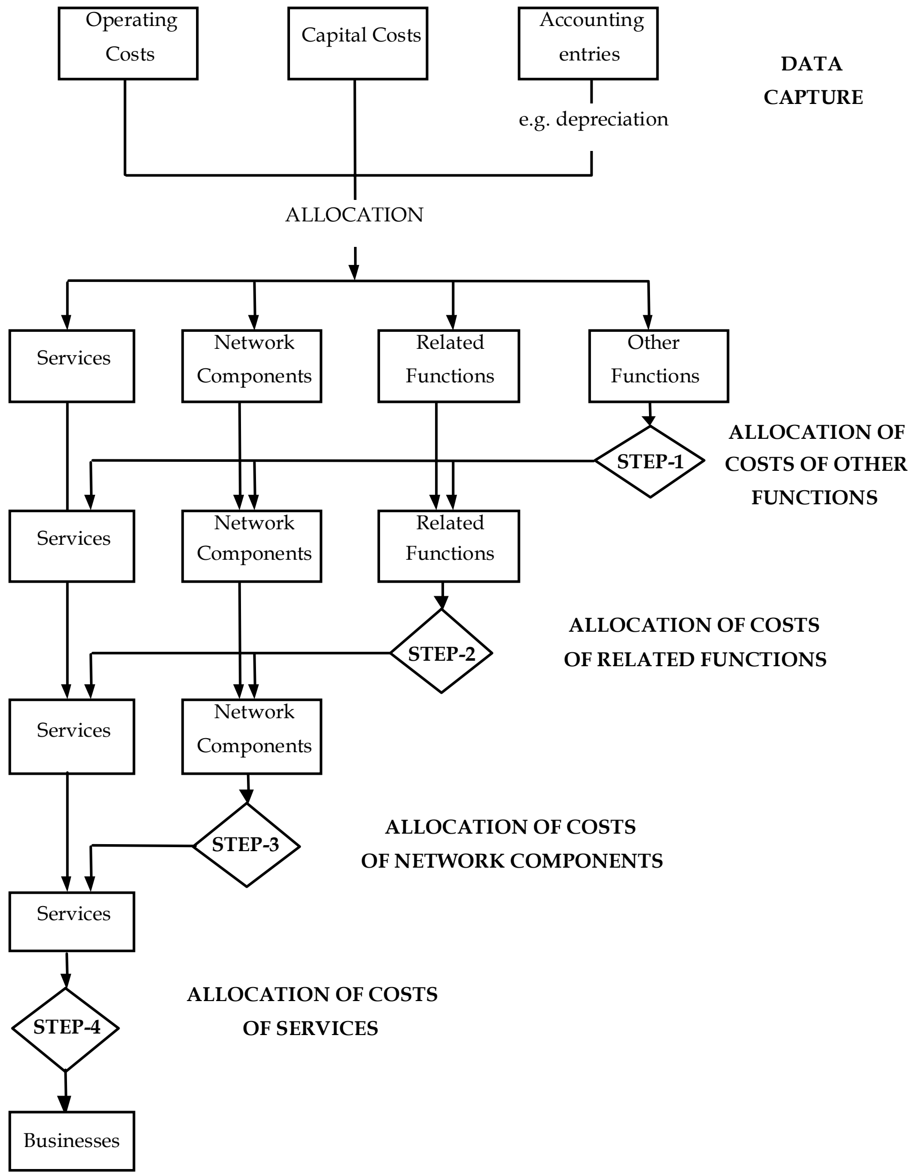
As noted, there are a series of steps which allocate cost pools in a tiered approach to eventually allocate costs to services. These step allocations are performed using appropriate drivers. Each step is summarised below:

- Step 1: The allocation of other functions across related functions, network elements and services;
- Step 2: The allocation of the related function costs to services and the network elements;
- Step 3: The allocation of network components to services;
- Step 4: The grouping of services into businesses (as defined for the purposes of accounting separation);

Each of the allocation steps illustrated above could involve a number of detailed sub-steps, particularly if the initial capture of cost information is at an aggregated level. Where it is possible to perform an allocation via a number of direct or indirect attributions this is preferable to allocation through a single arbitrary step.

It is anticipated that JT Ltd will need to use sampling techniques and periodic activity reviews in order to allocate costs (including capital costs) to the services that they provide and, subsequently to the businesses defined for the purposes of accounting separation.

Figure 1: Typical Cost Allocation Process



- The separated accounts must explicitly state differences, if any, between the extent of costs that are attributed and apportioned by JT Ltd and the extent of costs that have been approved by the JCRA for the purpose of determining charges, tariffs and similar matters.
- The separated accounts must in due course be subject to audit.

Q.8 Comment is invited as to the appropriateness of the principles that are stated, within the context of Jersey and its liberalisation process.

6. Practical application of the principles

This section considers how certain of the matters that have been outlined at the level of principle should be approached in practice.

6.1. Allocation of revenues and costs

In line with the principle of cost causality that has been referenced in section 5, the JCRA considers that each item of revenue or cost should be allocated directly related to JT Ltd's products and services, within each Licensed business activity or disaggregated activity.

In the case of revenue this can be expected to prove a relatively straightforward matter, as licensees can be expected to account for main activities in such a manner in the normal course of business. However, revenues which arise other than from main activity service provision activities, for example income arising from the investment of surplus cash, at a corporate level, should be allocated to individual business streams, but may involve use of a basis that will have to be determined by the JCRA, on a case by case basis.

The allocation of cost is typically not such a simple matter. This arises because costs may be common between a range of products and services.

The JCRA considers that costs should be grouped within three categories:

- Direct and directly attributable costs;
- Direct costs are those that can be unambiguously related to a service or product; and
- Indirectly attributable costs;

These are costs that can be related to a product or service through a relationship to other costs or other factors. The allocation is not arbitrary.

- Un-attributable costs.

These are costs that genuinely cannot fit into any of the above categories. The JCRA would expect this category to represent a low percentage of overall costs, certainly less than 10 per cent, and to typically comprise corporate level overheads.

By definition the costs cannot be allocated on a non-arbitrary basis.

A key requirement is to identify a method of allocating un-attributable costs on a basis that provides confidence that costs are fairly treated, both from the perspective of the Licensee that makes the allocation and its competitors, customers and other interested parties. There are several methods that might be applied. A number of these can give rise to significant complexity and cost. The JCRA is minded, provided that unattributable costs are at the level expected by the JCRA, that an Equal Proportionate Mark-up method is applied. In essence this allocates costs in proportion to the sum of direct and directly attributable cost, plus indirectly attributable costs that have been allocated to a product or service.

6.2. Costs that may not be relevant in regulatory terms

The allocation processes that have been described above would clearly result in the allocation of all costs (Fully Distributed Costs, or "FDC"). For certain regulatory decision processes the JCRA may determine that certain costs are inappropriate, particularly in areas where prices must be fixed or determined by the JCRA. Where costs are determined by the JCRA not to be relevant, the accounts prepared by the Licensee must provide a reconciliation between results calculated apportioning all costs and those apportioning only relevant costs.

6.3. Allocation of capital employed

When accounting separation is applied it is not sufficient to consider only revenues and operating costs. Capital employed in each of the separate business activities and disaggregated activities must also be identified. Capital employed allocation must relate exactly to the revenue and cost allocation to separate Licensed business activities and the disaggregated activities that have been described in section 4.7.

In order that the process may be transparent, the JCRA considers that the maximum practical level of granularity of accounting should apply. This means that each identifiable element of directly applied plant and equipment should be allocated on a basis that is unambiguous and objectively rational. The principal basis of allocation being directly to the business activity or activity, where such a relationship can be established. The apportionment of tangible assets that are used commonly for several activities requires particular attention and is likely to entail the use of utilization allocation bases, such as floor area, relative periods of use and so on.

The allocation of support equipment is likely to follow the pattern of directly applied plant and equipment, but may be expected to yield a higher proportion that must be apportioned because of common use.

The allocation of intangible assets may present particular difficulties. The JCRA would continue with the aim of allocating such assets to separate business activities or activities. This may imply the investigation of the history of the accounting treatment of transactions that give rise to the recognition of intangible assets. To the extent that any allocation is arbitrary, the JCRA would seek to sanction the basis used.

Items that are represented as purely financial investments must be investigated to ascertain the true nature of the investment, including the motivation for those apportioning only relevant costs. Only if the represented financial investment is truly not capable of rational allocation to a business activity or disaggregated activity, should it be isolated in regulatory accounts.

Working capital (broadly defined as current assets, less current liabilities) must be disaggregated into its component elements, i.e. cash, trade creditors, trade debtors and so on. These individual elements must, where practical, be allocated to individual business activities and disaggregated activities. Any use of arbitrary apportionments must be minimized and pre-agreed with the JCRA.

It is not required that dividend liabilities are allocated or apportioned.

6.4. Consistency that permits calculation of average capital employed

The JCRA believes that the treatment of capital employed should be consistent, period-on-period. This will assist with the calculation of average capital employed that may be utilised within the development of JCRA measures and determinations. Where for bona fide reasons the treatment of capital employed is altered, separated accounts must contain explanations and a reconciliation that clearly identifies the effect of any change.

6.5. Principles for a Transfer Charging System

This section of the Guidelines sets out the principles to be applied in order to take account of the costs of products or services that are used internally. A system of transfer charges should apply to services and products provided from one business (for example, Local Access-Network, Core Network and Retail) to another.

For accounting separation purposes, it should be assumed that JT Ltd's Retail business pays the same interconnection charge for the same service as would apply to wholesale customers.

The Transfer Charging Principles which the JCRA proposes should be followed are set out below:

- Transfer Charges (revenues and costs) shall be attributed to cost components, services and main business areas or disaggregated businesses in accordance with the activities, which cause the revenues to be earned, or costs to be incurred. Transfer charges should also incur the cost of capital.

- The attribution shall be objective in accordance with the principles set out in Section 6.1 and not intended to benefit any business or disaggregated business.

- There shall be consistency of treatment of Transfer Charges from year to year.

- The Transfer Charging methods used should be transparent. There should be a clear rationale for the Transfer Charges used and each charge should be supportable.

- The Transfer Charges for internal usage should be determined as the product of usage and unit charges.

- The charge for internal usage should be equivalent to the charge that would be levied if the product or service were sold externally rather than internally. For accounting separation purposes, it should be assumed that the retail business pays the same interconnection charge for the same service as set out in the Reference Offer, if different this charge must be appropriately justified.

- The separated accounts shall disclose the transfer charges between businesses and disaggregated businesses.

Q9. Comment is invited with regard to the practical application of accounting separation to JT Ltd, in regard to each or all of the four areas; revenue, cost, capital and transfer charging that are explored in this section.

7. Reporting and Publication

The JCRA considers that JT Ltd should be required to prepare, and supply to the JCRA, separated accounts for each of the Licensed business activities and disaggregated elements that have been described in section 4. In addition, it proposes that JT Ltd should prepare an account aggregating any other activities that do not fall within the section 4 definitions. This might include activities outside Jersey that are wholly unconnected with its Jersey businesses. The account for each Licensed business activity or disaggregated activity should include a Profit and Loss Statement, which details the make-up of revenues; transfer charges to and from other JT Ltd business activities and disaggregated activities; operating costs and margins; together with a Balance Sheet that differentiates between fixed assets, investments, current assets and current liabilities.

A statement should be provided that states mean capital employed by each separated business activity and disaggregated activity and the represented return on capital.

The JCRA considers that these should be supported by:

- A statement of the accounting policies applied, including cost conventions;
- A statement of the bases of allocation and apportionment of revenue, operating costs and capital that have been applied;
- A summary of transfer charges made amongst the separated business activities and disaggregated activities;
- A statement of costs disallowed, if any, by the JCRA for various regulatory purposes;
- A reconciliation of the separated accounts to the audited statutory accounts of JT Ltd; and
- A certificate from the Board of Directors of JT Ltd, initially certifying that the separated accounts are correct, to be followed, when appropriate, by a statement, in appropriate form, by the auditors of JT Ltd that certifies the representation of the separated accounts as being in accordance with published guidelines.

Q10. Do consultees agree with the JCRA's proposals on reporting requirements of separated accounts?

8. Cost Conventions to be applied in Accounting Separation

The principles and methodologies that have been described in sections 1 to 6 of this consultation document generally hold good regardless of the costing convention that is applied by JT Ltd and other individual licensees. Nevertheless, it is essential to consider the appropriateness of the costing conventions that are to be applied. This section explains why methods other than conventional historical accounting must be considered within the context of the obligations of the JCRA to regulate the Jersey telecommunications sector.

8.1. Historical costs

It is common practice that companies prepare their annual accounts using historical cost conventions (HCC). It is understood that JT Ltd revalued their assets during the year 2000. However, within the telecommunications sector HCC suffers from some major flaws, particularly if used as a basis for setting interconnect or certain other prices:

- HCC, by focusing on the past, reflects all inefficiencies that have developed over the years. This can be particularly significant when a company has, like JT Ltd, enjoyed a *de facto* monopoly for many years;
- Evolution of the costs of assets is not taken into account. Purchase prices can significantly increase or decrease over time and affect the value of assets; and
- Historical accounts cannot incorporate the impact of continuously evolving technologies. Hence HCC cannot ensure that costs are those of an operator employing modern technologies.

The result of these flaws is that if HCA is used to set prices in circumstances where a new entrant to the Jersey telecommunications market may have the choice of buying services from JT Ltd or investing on its own account i.e. a ‘make or buy decision’, it is probable that the decision will be distorted by inappropriate information, and thus not be economically efficient for Jersey.

8.2. Which approaches overcome the shortcomings of historical accounting?

The key question is “how can the potential distortions that arise through the use of HCA for pricing purposes be overcome?”

The JCRA considers that two objectives must be met:

- It is essential, as a minimum initial step, to find means of reflecting current costs and the use of modern technologies.
- However, it is also necessary to develop a forward-looking view of costs, rather than a ‘snap-shot ’ in time.

In considering how these matters should be approached it is useful to again reflect on why the work should be undertaken:

- The JCRA must encourage competition in the Jersey market and that competition, as far as is practical, must be efficient competition;
- To the extent that entrants consider certain services of JT Ltd as an alternative to the provision of their own means of achieving the same objectives, the pricing of the JT Ltd services must give rise to the economically correct 'buy or make' decision;
- JT Ltd must be permitted to recover the efficient cost of providing services to its competitors, including a return on capital; and
- Any basis chosen to achieve the objectives must permit transparency that ensures non-discrimination.

Q11. The JC*RA invites comment on whether the costing conventions proposed are considered to be appropriate.*

8.3. Long-run incremental costs

In order to achieve the objective of forming a forward view of costs and thus pricing, the JCRA considers that it is necessary to move by steps, from the adjustment of historic cost accounts to reflect current costs (Step l), to the adoption of long run incremental costs as the basis of certain areas of JT Ltd's pricing (Step 2).

Incremental cost represents the variance to costs that arises when output is raised by a substantial, defined amount. The relation of the measurement to a substantial change in output captures not only the change in directly attributable costs but potentially also increases/decreases in capital and fixed cost requirements.

This approach is considered more practical in application than attempts to identify marginal cost, which measures the cost of raising output by a single unit. In the further interests of practicality it is usual to measure the average long run incremental cost ("LRIC").

LRIC is a generic cost concept, defined as the increase in a firm's total costs as a result of an increase in output, or the costs voided if output falls. If the increment of output under consideration is the whole of a particular service, then the term 'total service incremental cost' is applied. The addition of 'long-run' indicates that the time horizon is sufficiently long for all types of cost to be avoidable. LRIC includes all variable (i.e. volume sensitive) costs and also the fixed costs specifically relevant to the increment of output under consideration. Fixed costs that are shared between, and common to, a number of services are not included (as they will be avoided if an increment of output of a particular service is no longer provided). It is normal to estimate LRIC and shared and common costs assuming efficient operating practices.

Once long-run incremental costs have been identified, there is a question as to whether other costs should be added in the form of some kind of mark-up on LRIC. These additional costs might include:

- Efficiently incurred shared and common fixed costs;
- Costs of conditioning the network and establishing access to outsiders;
- Legacy costs (e.g. costs associated with past investments and decisions that are not

avoidable if output ceases).
- Inefficiency costs.

Typically the first two of the above categories of costs are recovered via a mark-up on LRIC. It is less common for the last two categories of cost to be recovered in this way, although, in some circumstances, there may be an argument for doing so, at least for a limited period of time.

8.4. Adjusting historic accounts to reflect current costs and modern technologies (LRIC Step 1)

Step 1 requires the use of Current Cost Accounting.

This implies that all resources be reassessed at their current cost and that for the assets that are not available anymore on the market, the Modern Equivalent Asset ("MEA") methodology is applied. Under a current cost methodology, assets are valued on one or more of the following bases.

8.4.1. Net replacement cost

The net replacement cost is the cost of replacing the asset with another asset of similar characteristics and age.

Replacement cost can simply be the cost today of replacing the asset with an identical one. However, when technology is changing rapidly, the existing asset may no longer be replaceable (e.g. it is no longer manufactured). In this case it is necessary to calculate the MEA value which is the value of an asset with the same level of capacity and functionality as the existing asset. The issues relating to the calculation of MEA values for telecommunications operators are considered further below.

8.4.2. Modern Equivalent Asset valuation

The adoption of CCA methodologies in telecommunications is complicated by the rate of technological change in the industry. This has implications in both identifying suitable replacement costs for old technology assets and ensuring the assets exhibit the same levels of functionality and capability.

The new technologies are usually far superior to the old technologies in terms of functionality and efficiency. However, since MEA values are required to reflect assets of equivalent capacity and functionality, it is necessary to make adjustments to the current purchase price and also the related operating costs - for example, the new asset may require less maintenance.

8.4.3. Adjustments to depreciation

The depreciation charge for the year is calculated on the basis of the new asset valuations. This ensures that the current cost of fixed assets consumed during the year is charged against revenue.

Supplementary depreciation is the difference between historical cost depreciation and current cost depreciation charge. It may be positive or negative depending on whether the value of assets is rising or falling. It is a charge against profits in the P&L account. For each asset, or group of assets, the depreciation charge, assuming straight line depreciation, can be derived by dividing the gross replacement cost by asset life.

It is increasingly common for the assessed life of an asset to be changed. In recent years the pace of change in telecommunications technology has led to a trend to reassess the life of assets downward.

To the extent that the effect of such adjustments is not captured by the valuation factors described in earlier sections, any depreciation adjustment or write-off should be separately recorded and reported.

Any adjustments arising within this section should be treated in exactly the same way as they are dealt with within the HCA accounts that are published by JT Ltd and other individual licensees.

8.4.4. Capital Maintenance

There are alternative approaches within CCA to the treatment of the capital of a business, or of a business activity within a larger business. Both recognize the principle that capital must be maintained before any profit is recognized, otherwise a false picture of the business will be portrayed. This issue is of greatest importance for the measure of profits available for distribution in the P&L account, but it also affects the division between capital and retained profits in the balance sheet.

Capital can either be viewed in operational terms i.e. as the company's capacity to produce goods and services (Operating Capital Maintenance), or, in financial terms i.e. as the value of shareholder's equity interest (Financial Capital Maintenance).

Financial Capital Maintenance (FCM) is concerned with maintaining the real financial capital of the company and with its ability to continue financing its functions. Capital is assumed to be maintained if shareholders' funds at the end of the period are maintained in real terms at the same level as at the beginning of the period. Under FCM, profit is therefore only measured after provision has been made to maintain the purchasing power of opening financial capital.

The alternative, Operating Capital Maintenance (OCM) is concerned with maintaining the physical output capability of the assets of the company. Capital maintenance under this approach requires the company to have as much operating capability – or productive capacity – at the end of the period as at the beginning.

Under OCM, profit is therefore only measured after provision has been made for replacing the output capability of a company's physical assets. Generally, this would require the application of specific inflation indices to the values of the company's assets. The use of the OCM concept may systematically incorporate insufficient or excess returns into the level of allowed revenue (depending, respectively, on whether asset-specific inflation was expected to be lower than or higher than general inflation). Under FCM, however, the returns to the providers of capital would equal the required return (as measured by the cost of capital) irrespective of whether replacement costs were rising or falling relative to general prices.

The JCRA considers that it should accept Financial Capital Management as the appropriate basis to be associated with Current Cost Accounting.

Q12. Comment is invited related to this assessment by the JCRA.

8.4.5. Further adjustments associated with FCM

Under FCM, P&L items need to be further adjusted to take into account holding gains or losses that arise due to the effect of asset-specific inflation on the current cost value of assets, as well as the effect of general inflation on shareholders' funds.

8.4.6. Further efficiency factor adjustments

Whilst the adjustment of asset values and FCM related adjustments can move some way forward in adjusting JT Ltd's figures to more closely approximate to those of an operator employing modern methods, it will remain necessary for the JCRA, in its use of figures for pricing control or approval purposes, to ensure that further efficiency factors are applied. This is because, whatever the decisions of JT Ltd management or those of other individual licensees to carry costs above the efficient minimum, these costs should not be passed on to new market entrants.

It is not possible for the JCRA to be prescriptive with regard to these factors at this time, but it can be anticipated that it would seek to eliminate monopoly inefficiencies from pricing calculations. In considering these factors the JCRA intends to consider benchmarking data from other jurisdictions, together with an analytical review of data supplied by JT Ltd.

8.5. Forward-looking costs (LRIC Step 2)

In applying LRIC, the JCRA considers that initially costs should be determined on a top-down basis, reconciled back to actual costs and the reported current cost accounting statements. The JCRA considers that what is known as the 'scorched node' approach should be applied. This means that the existing node topology of the JT Ltd network should be accepted as optimum.

The 'scorched node' approach contrasts with its alternative, the 'scorched earth' approach. Under this approach the JT Ltd network would not be accepted as an efficient model and the entire operation would be reassessed on the basis of modern engineering principles. In theory, this approach, also associated with what is known as 'bottom-up modelling', would eliminate the effect of any inefficiencies within JT Ltd's operations that have not been flushed out by the adjustments that have been considered in earlier sections.

The JCRA presently takes the view that the relatively small size of Jersey and the relative simplicity of the JT Ltd network model could not justify the cost and delay associated with the scorched earth approach at this time. The JCRA is also aware that where the scorched earth approach has been applied in other jurisdictions difficulties of reconciliation to HCA and CCA numbers have arisen.

In making its assessment the JCRA does not rule out the imposition of the bottom-up approach at a later date, should competition not develop at an acceptable level and grounds exist to suggest that the alternative approach might be beneficial to achieving efficient competition.

Q13. The JCRA invites comment on the assessment that the 'scorched node' approach should apply, within the current context.

In order to achieve a forward view, LRIC demands that costs are extrapolated. This is achieved by establishing a cost/volume relationship between elements of cost, using the causation principle that has been described in section 6. At an individual service level this implies a move to Activity Based Costing ("ABC") techniques. The JCRA is aware that JT Ltd have implemented this technique. ABC focuses on determining what causes cost to occur rather than merely allocating what has been spent. The same causation principle is applied to determine the appropriate extrapolation time horizon for each element of cost. Clearly, the cost/volume relationship is not normally linear and thus a series of curves arise that may be utilised in considering output from the LRIC process.

8.6. Extent of application of CCA and LRIC in accounting separation

The descriptions that have been supplied indicate a significant level of complexity in the application of CCA and LRIC. It is implicit within LRIC that there is some dependency on extrapolations and assumptions.

The JCRA considers that whilst it might be of interest to apply CCA and LRIC in all separated accounts reporting (which has been described earlier in this section) it is only practical to apply the techniques in those areas which are from time to time actively regulated, in terms of price control, by the JCRA. In those areas the techniques should be applied at the individual service level, with a view to their contribution to setting cost-based prices, which will in turn give rise to correct economic decisions on the part of the entrants to the Jersey telecommunications sector. In all other instances separated HCA reporting is acceptable.

Q14. Do consultees agree that stand-alone costing is valid in exceptional circumstances?

Q15. Comment is invited on the appropriate restriction of the application of CCA and LRIC.

8.7. Exceptional use of Stand-Alone Costing

Pricing that is set below the LRIC of any service is *prima facie* predatory, i.e. it seeks to exploit market power advantages to damage competitors. At the other end of the spectrum of possibilities it can be necessary to ascertain the maximum justifiable price for a service. This can give rise to a need for the JCRA to require JT Ltd and other individual licensees to allocate efficient costs to a service or product on the basis that the service or product is supplied in complete isolation of all other services.

The JCRA considers that in present circumstances JT Ltd should not be required to apply multiple costing standards. The JCRA will accordingly require the application of this standard only on an exceptional basis.

9. Actions contemplated by the JCRA, subject to this consultation

Subject to comments received in the consultation process, the JCRA intends to issue an accounting separation direction, which would require JT Ltd, in particular, to:

1. Submit (within a period of three months) detailed proposals, incorporating an allocation and apportionment methodology, for the preparation of separate accounts for each of the business activities and disaggregated activities that are set out in this consultation document.

2. To establish and implement (within six months) a system of transfer pricing that is approved by the JCRA, between the elements of JT's business that are affected by 1 above.

3. To submit (within three months) detailed proposals for the implementation of CCA in relation to interconnect and other regulated activities.

4. Production of the first set of regulatory accounts, based on HCC principles by 30 June 2005 for the financial year 31 December 2004, and annually to the same timetable thereafter.

5. To submit, within six months, detailed proposals for the implementation of LRIC in relation to interconnection and other regulated areas.

6. Following the approval of a proposal put forward by JT Ltd, JT Ltd will be required to produce and lodge with the JCRA a Procedures Manual that details both the associated organizational matters and cost allocation and apportionment methodologies. The JCRA will require that compliance with this Manual will be specifically considered by the auditor of JT Ltd, in the process of forming its view as to whether the separated accounts are in accordance with the JCRA's published guidelines.

Q16. Comment is invited on the actions and timetable contemplated by the JCRA.

10. Consultation

The JCRA welcomes comments on issues and questions raised in this document. Views submitted will be considered by the JCRA in drawing up its final guidelines on accounting separation and associated costing methodologies at the end of this consultation.

Responses may be sent in writing, by post or e-mail, no later than 30 June 2004 to:

Charles Latham
Executive Director
JCRA
6th Floor
Union House
Union Street
St Helier
Jersey JE2 3RF

E mail: c.latham@jcra.je

Submissions and comments may be published by the JCRA on its website, unless the respondent provides a justified request for confidentiality.

Annex 1 Definitions of Disaggregated Retail Services

<u>Fixed Line Services</u>

Retail – Exchange Line Rental and Connection
Connection charges and monthly or quarterly rental of fixed exchange lines.

Retail – Local Calls
Local dialled calls originating from ordinary and ISDN exchange lines.

Retail – Guernsey calls
Guernsey dialled calls originating from ordinary and ISDN exchange lines.

Retail – National Calls
Dialled calls charged at national tariff rates originating from ordinary and ISDN exchange lines.

Retail – International Calls
International calls (to fixed and mobile networks) originating from ordinary and ISDN exchange lines.

Retail – Calls to Jersey Mobile
Local dialled calls originating on ordinary and ISDN lines that terminate on a Jersey mobile, not fixed, network.

Retail – Non-Geographic calls free to calling customer
Dialled calls to non-geographic numbers where the calling party does not pay any charge for the call.

Retail – Non-Geographic calls charged at local call rate
Dialled calls to non-geographic numbers where the calling party is charged at the same rate as a local dialled call

Retail – Non-Geographic calls charged at national call rate
Dialled calls to non-geographic numbers where the calling party is charged at the same rate as a national dialled call.

Retail – Non-Geographic calls charged at Premium Rate
Dialled calls to non-geographic numbers where the calling party pays a premium rate for value added services.

Retail – Internet
ISP and other non-calls-based Internet revenues.

Retail – Directory Enquiries
Local, national and international calls placed with the operator to obtain information about Jersey and overseas telephone numbers, whether made from business or residential telephone exchange lines or from public payphones and including calls made to the Directory Enquiries database.

Retail – Public Payphones
Local, national, international and mobile dialled calls, originating from public payphones, using cash, phone cards or credit cards. This includes managed and restricted access payphones but not private payphones.

Retail – Leased Lines (private circuits)
Rental, maintenance, connection and change of local, national and international leased lines beyond customers' premises and which have access to the public network, not including wiring of buildings or other wiring that does not have access to the public network.

Retail – Remaining activities
All other telecommunications services (including calls from private payphones and circuits which are within curtilage and without access to the public network) that are within the Retail Business.

Mobile Services

Retail –Rental and Connection
Connection charges and monthly rental of mobile telephones.

Retail – Local Calls
Local dialled calls terminating on fixed local exchange lines.

Retail – Guernsey calls
Guernsey dialled calls originating from mobile telephones.

Retail – Calls To Jersey Mobiles
Local dialled calls between JT Ltd mobile telephones.

Retail – Calls from Jersey Mobiles
Local dialled calls terminating on JT Ltd mobile telephones.

Voice over IP
A technology for transmitting ordinary telephone calls over the Internet using packet linked routes. Also called IP telephony.

MMS
Multimedia Messaging Service is a messaging service for the mobile environment very similar to Short Message Service (SMS), or text messaging. It provides automatic, immediate delivery of personal multimedia messages from phone to phone or from phone to e-mail. In addition to the familiar text content of text messages, multimedia messages can contain images, graphics, voice, and audio clips.

Broadband
A transmission facility having a bandwidth sufficient to carry multiple voice, video or data channels simultaneously.

xDSL
Designation for digital subscriber line technology enabling simultaneous two-way transmission of voice and high-speed data over ordinary copper phone lines. It refers to the family of digital

subscriber line technologies, such as ADSL, HDSL and RADSL.

Others

e.g. UMTS (Universal Mobile Telecommunications System) is a so-called "third-generation (3G) Enhanced Message Service

Annex 2. Operating Costs

The cost allocation process outlined in Section 6 of the Guidelines relates, in principle, to both operating and capital costs. Table 2.1 overleaf provides a summary of possible allocation and attribution methods for operating costs under the following headings:

- Depreciation;
- Provision, installation and maintenance costs;
- Network planning and development costs;
- Network management costs;
- Marketing and sales costs;
- Billing and collection costs;
- Operator services costs;
- Directory services costs;
- Payments to other operators; and
- Support costs.

These headings are purely illustrative and are not intended to reflect the way in which JT Ltd is expected to record costs. They are intended to provide high-level guidance only. JT Ltd will need to develop cost allocation procedures specific to the way in which they currently capture and record costs, and to refine these over time, as appropriate.

The final column of Table 2.1 provides an indication of the principal businesses to which it might be expected that the majority of the operating costs in question would be allocated.

<u>Table 2.1 Methods of allocating operating costs*</u>

Category of Operating cost	Description	Method of Allocation	Principal Businesses
Depreciation	Depreciation	The allocation of depreciation should follow the allocation of the fixed assets to which it relates (see Annex 3).	All
Provision and installation of equipment	Payroll costs	Direct to network components/other plant where possible; otherwise allocate based on the time spent carrying out installation work.	Core Network, Local Access-Network, Mobile
	Installation, contract and maintenance costs	Direct to network components/other plant on the basis of the plant installed or maintained where possible.	Core Network, Local Access-Network, Mobile
Maintenance and repair costs	Payroll costs	Direct to network components/other plant where possible; otherwise allocate based on the time spent carrying out installation work.	Core Network, Local Access-Network, Mobile
	Other costs	Direct to network components/other plant where possible.	Core Network, Local Access-Network, Mobile
Network planning and developments costs	Payroll and external costs	Direct to network components/other plant where possible.	Core Network, Local Access-Network, Mobile
Network management costs	Payroll costs	Allocate to network components/other plant on the basis of the time spent by staff to manage each type of plant.	Core Network, Local Access-Network, Mobile
	Other costs	Allocate to network components/other plant on the basis of the plant managed, where possible.	Core Network, Local Access-Network, Mobile
Marketing and sales costs	Payroll	Direct to products and services where possible; otherwise allocate between products based on labour time.	Retail
	Cost of sales of equipment	Allocate to customer equipment services within "Other activities".	Other Activities
	Publicity Promotions Market research Distributors fees Other costs	Direct to products and services where possible. Otherwise, for those costs where multiple services are being marketed or promoted, cost should be attributed to the related services on a reasonable basis.	Retail

* Residual unattributable costs should be specifically identified by JT Ltd and their treatment will be considered separately by the JCRA.

Table 2.1 Methods of allocating operating costs (cont.)*

Category of Operating cost	Description	Method of Allocation	Principal Businesses
Billing and collection costs	Payroll costs	Direct to products and services where possible; otherwise allocate between products based on labour time.	Retail (some costs to Core Network)
	Other billing costs (incl. Bad debts)	Direct to products and services where possible; otherwise allocate between products based on usage (e.g. number of bills produced).	Retail (some costs to Core Network)
Operator services costs	Payroll costs	Direct to services where possible. The costs of staff that carry out tasks for several operator services should be allocated to the related operator services based on time spent on different tasks.	Retail
Directory services costs	Payroll and other costs	Direct to products and services.	Retail
Payments to other operators	Out-payments for outgoing international traffic	Direct to products and services.	Retail
	Payments for interconnection agreements	Direct to products and services.	Retail
Support costs	Human resources function costs	HR function costs should be allocated to the staff that are overseen by the HR function and allocated using the same basis as the payroll costs of HR staff.	All
	Finance and other head office support functions	If related specifically to a product, service or business allocate accordingly.	All
	Building costs and rent	Costs should be allocated in the same way as land and buildings (see Annex 4).	All
	General computing/IT costs	Allocate to the applications run by the operator on the basis of the use of the computers to support each application. Costs allocated to applications can then be attributed to those products and services that they support.	All

* Residual unattributable costs should be specifically identified by JT Ltd and their treatment will be considered separately by the JCRA.

Annex 3. The cost of capital and capital employed

The JCRA has issued a Decision Paper and Direction on the Cost of Capital (2004/4). Please refer to the JCRA website www.jcra.je for further information.

3.2 The WACC and capital value

The WACC must be applied to a capital value for network components and other related assets in order to determine the return that needs to be recovered. While it may be easy to identify the values of debt and equity for JT Ltd as a whole, it is not easy to do so for each of its constituent activities. This is because decisions about debt finance are largely corporate decisions determined by a number of factors, such as historical borrowing facilities and tax planning considerations. Hence, the debt position of the corporate organisation may not relate specifically to the funding requirements of individual activities. An alternative approach to determining the capital value for regulated activities (such as interconnection) is therefore required.

One approach is provided by the following balance sheet identity:

Shareholders' funds (i.e. equity) + Debt = Net Assets excluding debt[7]

It follows that the capital values of regulated activities can be determined by apportioning net assets or capital employed. This apportionment should be carried out on a causal basis and under current valuation methodologies.

3.3 Capital employed

Table 3.1 provides a summary of possible allocation methods for different items of capital employed, together with an indication of the principal businesses to which it might be expected that the majority of each item would be allocated. The application of these and, as appropriate, other methods will determine the capital values of different regulated activities, including interconnection.

The table is not intended to be an exhaustive list of items that might be classified as capital employed nor of the methods for allocating them to different activities

[7] i.e. fixed assets + current assets – creditors (excluding debt) - provisions.

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<u>Table 3.1 Methods of allocating capital employed*</u>

Category of assets and liabilities	**Description**	**Method of Allocation**	**Principal Businesses**
<u>Tangible assets</u> ***Primary Plant-***			
Switching equipment	Local switching equipment	Direct to access or network components where possible. Otherwise allocate to Local Access-Network services and to network components on the basis of the relevant cost of the equipment dedicated to provide customer lines and of the parts dedicated to switch traffic, respectively. Local switch network components can be allocated to products and services based on seconds of use.	Core Network (some costs to Local Access-Network), Mobile
	Tandem switching equipment	Direct to network components where possible, otherwise allocate based on seconds of use.	Core Network
	International switching equipment	Direct to network components where possible, otherwise allocate based on seconds of use.	Core Network
	Switching equipment for special services networks	Direct to core network components where appropriate/required by regulation or to the specific services provided by other networks – e.g. data transmission switching equipment should be allocated directly to data transmission services.	Core Network, Other activities
	Other switching equipment	Direct to network services where possible, otherwise allocate to other switching network components on the basis of the use of the equipment.	Core Network

* Residual unattributable costs should be specifically identified by JT Ltd and their treatment will be considered separately by the JCRA.

Table 3.1 Methods of allocating capital employed (cont.)*

Category of assets and liabilities	Description	Method of Allocation	Principal Businesses
Transmission equipment	Traffic-sensitive transmission equipment	Direct to network components where possible, otherwise allocate based on the usage of circuits.	Core Network
	Cable and wire	Direct to access or network components where possible, otherwise allocate to components based on the amount of cable used to provide different services.	Local Access-Network, Core Network, Mobile
	Local loop equipment	Direct to products where possible (e.g. separately identifiable ISDN access equipment), otherwise allocate between access services based on line usage.	Local Access-Network
	Radio and satellite equipment	Direct to network components where possible, otherwise allocate based on the usage of channels.	Core Network, Mobile
	Transmission equipment for special services networks	Direct to the specific non-PSTN/non-ISDN services provided by the network – e.g. data transmission equipment directly allocated to data transmission services.	Core Network
	International/submarine cable	Direct to network components where possible, otherwise allocate based on usage.	Core Network
Other primary network assets	Special network plant	Plant and equipment that is used solely to provide one specific service should be allocated directly to the relevant services. Examples may include: • Intelligent networks equipment; • Data transmission equipment; • Multimedia equipment.	Core Network Other activities
	Customer premises equipment	Direct to products and services.	Other activities
	Public payphones and related equipment	Direct to service.	Retail

* Residual unattributable costs should be specifically identified by JT Ltd and their treatment will be considered separately by the JCRA.

Table 3.1 Methods of allocating capital employed (cont.)*

Category of assets and liabilities	Description	Method of Allocation	Principal Businesses
Support Plant	Ducting	Ducting can be allocated to the cable and wire that it supports and allocated to products in the same way as cable and wire.	Local Access-Network, Core Network, Mobile
	Power equipment	Allocate to primary plant groups on the basis of the use of power equipment to support each plant– e.g. kilowatts per hour. Assets should then be allocated to products in the same way as the relevant primary plant groups.	Local Access-Network, Core Network, Mobile
	Network management systems	Allocate to primary plant of the different networks provided on the basis of the use of the systems to support each plant – e.g. time spent to control local exchanges, tandem exchanges and international exchanges. Costs should be attributed to products and services in the same way as the related primary plant group.	Core Network
Non-network fixed assets	Land and buildings	Allocate to products, services and network components on the basis of the space occupied (i.e. floor space) to support each product, service or network component.	All
	General computers	Allocate to the applications run by the operator on the basis of the use of the computers to support each application. Costs allocated to applications can then be attributed to those products and services that they support.	All
	Motor vehicles	Allocate to the products and network components based on usage.	All
	Furniture and office equipment	Allocate to the products and network components based on usage.	All

* Residual unattributable costs should be specifically identified by JT Ltd and their treatment considered separately by the JCRA.

Table 3.1 Methods of allocating capital employed (cont.)*

Category of assets and liabilities	Description	Method of Allocation	Principal Businesses
Intangible fixed assets	Intangible fixed assets	Direct to products where possible. Any residual or unattributable assets will need to be allocated on an arbitrary basis, to be agreed with the NRA.	All
Working capital	Fixed asset investments:	Direct to "Other activities".	
	Pure financial investments	Direct to "Other activities".	Other activities
	Investments in unrelated activities		Other activities
	Other investments	Direct to the services to which the investments are related, otherwise allocate based on usage.	All
	Short-term investments (including cash at bank and in hand)	Direct to businesses where possible, otherwise allocate based on the operational requirements of each business.	All
	Stocks	Stocks should be allocated directly to products and services.	All
	Trade debtors/receivables	Trade debtors may be allocated to products and services based on billing system information where possible. Unattributable balances will need to be allocated on an arbitrary basis, to be agreed with the NRA.	All
	Other debtors/receivables	Other debtors/receivables should be apportioned to products and services if possible. Unattributable balances will need to be allocated on an arbitrary basis, to be agreed with the NRA.	All
	Trade creditors	Trade creditors should be allocated directly to products and services if possible. Unattributable trade creditors will need to be allocated on an arbitrary basis, to be agreed with the NRA.	All
	Long term provisions	Direct to the activities that give rise to the provisions in question.	All
	Liabilities for taxation and dividends	No allocation required. Instead average liabilities should be taken into account when considering the operational cash requirements of each business (see "Short-term investments")	All

* Residual unattributable costs should be specifically identified by JT Ltd and their treatment will be considered separately by the JCRA.

3.4 The need for consistency in the treatment of working capital

Table 3.1 proposes one approach to the treatment of working capital in the calculation of capital employed. There are, however, other approaches which may be equally valid. In practice, there are two principles that ought to be applied when considering the treatment of individual items of working capital for the purposes of separate accounting. They are as follows:

- There should be consistency between the treatment of assets and their associated costs and revenues; and
- Inclusion or exclusion of individual items ought, in principle, to have a corresponding impact on the WACC. These two effects (i.e. the decision to include or exclude items and the corresponding adjustment to the WACC) offset each other in terms of their overall effect on the absolute return required by operators.

Annex 4. Revenue

Section 6 of the Guidelines sets out some principles for the allocation and attribution of costs and revenues to the products and services offered by operators. In this annex the application of these principles to revenue is considered.

4.1 Revenue from core telephony activities

It is expected that revenues from the provision of core telephony products and services can be directly allocated to the products and services to which they relate based on accounting records and billing system information. In those cases where direct allocation based on accounting records or billing system data is not possible, revenues should be attributed on the basis of causation.

The allocation of revenues from core telephony services between Local Access-Network, Core Network and Retail for a fixed telephone network is summarised below[8].

Connection charges
Charges for establishing new connections to the fixed telephone network (other than for establishing a Point of Interconnect – see Interconnection charges below) should be assigned to Retail.

Customer line rental charges
Line rental charges should be assigned to Retail.

Revenues from leased lines
Revenue from leased lines should be allocated to Retail.

Revenues from line rental to other operators
Where provided to other market players, revenue from line rental of unbundled local loops should be assigned to Local Access-Network.

Interconnection charges
Interconnection charges, including the one-off costs of establishing a Point of Interconnect and volume-related charges should be allocated to Core Network.

Call charges
Revenue from call charges should be allocated to the appropriate service within the Retail business.

Basic equipment rentals
Revenue from the rental of basic equipment such as telephones and facsimile machines should be allocated to the appropriate services within "Other activities".

Revenue from advertising in directories
Revenue received from advertising in directories should be allocated to a directory services account in "Other activities".

[8] The same principles can be applied by analogy to other networks.

Engineering services/consultancy
Revenue from engineering services/consultancy other than for interconnection should be allocated to "Other activities".

4.2 Mobile

Revenue received from all mobile services should be recorded within the mobile accounts.

4.3 Other revenue

JT Ltd may also generate income from non-telephony services. In accordance with the principle of causation these should be allocated to the activities to which they relate.

One example would be revenue from sub-letting parts of properties used by the core telephony businesses, the revenue from which could be treated in a number of ways. Options include:

- treating the revenue as revenue for the business sub-letting the accommodation; and
- recording the revenue under "Other activities".

No one approach is necessarily better than the others that may be available. However, it is important that the revenues from non-core activities and the costs associated with them are treated consistently. Failure to do so would lead to the profits of one business being understated and the profits of another overstated.

Income from fixed asset investments should be allocated in the same way as the investments to which they relate. Given the approach adopted in Section 7 to the allocation of pure financial investments and investments in unrelated activities, the income from these investments would be allocated to "Other activities". Income from fixed asset investments should only be allocated to Local Access-Network, Core Network or Retail if the related investments are allocated in this way.

The same principles apply to income received from short-term investments. The income should be allocated to the business to which the associated investment is allocated.

Annex 5 Proforma Reporting Formats

Figure 5.1 –Proforma reporting formats for the Core Network business

(a) Profit and Loss

	Current Year	**Prior Year**	
Turnover			
From Retail			
From other operators			
Total turnover			①
Operating costs			
CCA adjustments			
Total operating costs			②
Return			③ = ① - ②

The calculation of the return must be consistent with the basis on which the cost of capital is calculated. Therefore, if - as envisaged in the main body of the guidelines – a pre-tax and pre-interest WACC is used, the return shown in the accounts should be equivalent to profit before interest and tax.

Figure 5.1 (cont.) – Proforma reporting formats for the Core Network business

(b) Balance sheet information

	Current Year	Prior Year	
Fixed assets			
Tangible fixed assets			
Intangible fixed assets			
Investments			
Total fixed assets			①
Current assets			
Stocks			
Debtors			
Investments			
Cash at bank & in hand			
Total current assets			②
Creditors			③
Provisions for liabilities and charges			④
Mean capital employed			⑤ = ①+② - ③ - ④

All entries in the "balance sheet" should be prepared on a current cost basis. They should be average values for the year to which they relate. Where possible and material the average values shown should be weighted averages. If information is not available, a simple average of opening and closing balances may initially be used.

(c) Return on capital employed

	Current Year	Prior Year	
Return			①
Mean capital employed			②
Return on mean capital employed (%)			③ = ①/②

Figure 5.2 – Proforma reporting formats for the Local Access-Network business

(a) Profit and Loss

	Current Year	Prior Year	
Turnover			
Transfer charges to Retail			
From other operators (if any)			
Total turnover			①
Operating costs			
CCA adjustments			
Total operating costs			②
Return			③ = ① - ②

(b) Balance sheet information
As for Core Network.
(c) Return on capital employed
As for Core Network.

Figure 5.3 – Proforma reporting formats for the Retail business

(a) Profit and Loss

	Current Year	Prior Year	
Turnover:			
Connection charges			
Rental charges			
Call charges			
Other turnover			
Total turnover			①
Operating costs:			
Operating costs specific to Retail			
Transfer charges from Core Network			
Transfer charge from Local Access-Network			
CCA adjustments			
Total operating costs			②
Return			③ = ① - ②

The same formats would apply to separate regulated activities within Retail.

(b) Balance sheet information

As for Core Network.

(c) Return on capital employed

As for Core Network.

Figure 5.4 – Proforma reporting formats for the Mobile business

(a) Profit and Loss

	Current Year	Prior Year	
Turnover:			
Total turnover			①
Operating costs:			
Operating costs specific to Mobile			
Transfer charges from Core Network			
Transfer charge from Local Access-Network			
CCA adjustments			
Total operating costs			②
Return			③ = ① - ②

(b) Balance sheet information

As for Core Network.

(c) Return on capital employed

As for Core Network.

Figure 5.5 – Proforma reporting formats for "Other activities"

(a) Profit and Loss

	Current Year	**Prior Year**	
Turnover			①
Operating costs			②
	_______	_______	
Return			③ = ① - ②

As discussed in the main body of the guidelines there may be a case for disaggregating "Other activities" in order to provide greater transparency of the performance of specific activities. It will be up the JCRA to specify the extent to which separate accounts for these activities will be prepared.

(b) Balance sheet information
As for Core Network.

(c) Return on capital employed
As for Core Network.

Table 5.6 Statement of Costs of Network Services

The Statement of Costs of Network Services presented here is an example of the table that JT Ltd might use for the purpose of fulfilling the requirements set out in the document.

This should be interpreted as an illustrative example and should be modified in accordance with the particular characteristics of JT Ltd's network and its components.

Both Eircom and British Telecom have their regulatory financial statements published on their respective web-sites, and these might also be used as a reference for these statement of costs of network services.

Table 5.6 (JT Ltd to amend and supply a completed table that reflects the JT Ltd network, the table below is illustrative)

STATEMENT OF COSTS OF NETWORK SERVICES

	TRAFFIC SENSITIVE			NON-LENGTH DEPENDANT				LENGTH DEPENDANT			
	Subscriber unit	Primary Switch	Secondary Switch	RSU to Primary/ Secondary Link	Primary to Primary Link	Primary to Secondary Link	Secondary to Secondary Link	RSU to Primary/ Secondary Link	Primary to Primary Link	Primary to Secondary Link	Secondary to Secondary Link
Average costs (pence/min.)	x	x	x	x	x	x	x	x	x	x	x
Total costs	x	x	x	x	x	x	x	x	x	x	x
Usage Factors (routing or percentages)											
Retail Services											
Local calls	x	x	x	x	x	x	x	x	x	x	x
Local internet calls	x	x	x	x	x	x	x	x	x	x	x
Guernsey calls	x	x	x	x	x	x	x	x	x	x	x
National calls	x	x	x	x	x	x	x	x	x	x	x
…	x	x	x	x	x	x	x	x	x	x	x
…	x	x	x	x	x	x	x	x	x	x	x
RIO services											
Call termination	x	x	x	x	x	x	x	x	x	x	x
Call origination	x	x	x	x	x	x	x	x	x	x	x
…	x	x	x	x	x	x	x	x	x	x	x
…	x	x	x	x	x	x	x	x	x	x	x

Table 5.6 cont STATEMENT OF COSTS OF NETWORK SERVICES (conveyance element) (JT Ltd to amend and supply a completed table that reflects the JT Ltd network, the table below is illustrative)

	TRAFFIC SENSITIVE			NON-LENGTH DEPENDANT				LENGTH DEPENDANT								
	Subscriber unit	Primary Switch	Secondary Switch	RSU to Primary/ Secondary Link	Primary to Primary Link	Primary to Secondary Link	Secondary to Secondary Link	RSU to Primary/ Secondary Link	Primary to Primary Link	Primary to Secondary Link	Secondary to Secondary Link	Gradient - Peak	Gradient - Off-Peak	Gradient - Weekend	Call conveyance cost per minute - peak	Call conveyance cost per minute - off-peak
Average costs (cent/min.)	X	x	x	x	x	x	x	x	x	x	x					
Average cost per minute (1)																
Retail Services																
Local calls	X	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Local internet calls	X	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Guernsey calls	X	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
National calls	X	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
…	X	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
…	X	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
RIO services																
Call termination	X	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Call origination	X	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
…	X	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
…	X	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

(1) Those costs are obtained from multiplying the average cost per minute by the usage factors, both of which are shown in the table of previous page. These costs reflect the conveyance element of the service only

Table 5.7 **Transfer Charge Statement (£)**

Services / Costs	Network	Local Access	Other Operating	Total Transfer Charges
Exchange Line rental and connection				
Local calls				
Local internet calls				
National internet calls				
Guernsey calls				
National calls				
International calls				
Calls to Jersey mobiles				
Non-geographic calls free to calling customer				
Non-geographic calls charged at local call rate				
Non-geographic calls charged at national call rate				
Non-geographic calls charged at premium rate				
Internet				
Directory Enquiry				
Public payphones				
Lease lines				
Remaining Activities				

Table 5.8 **Inter Business Costs Summary (£)**

	TO	Access	Network	Retail	Mobile	Other	Total
FROM							
Access			X	X	X	X	**X**
Network		X		X	X	X	**X**
Retail		X	X		X	X	**X**
Mobile		X	X	X		X	**X**
Other		X	X	X	X		**X**
Total		**X**	**X**	**X**	**X**	**X**	**X**

Annex 6 Current Cost Accounting

6.1 Calculation of current cost asset values

A key element of the current cost methodology is the valuation of assets. Assets could be valued according to the following considerations and decision rules:

Net Replacement Cost

The Net Replacement Cost is the cost of replacing the asset with another asset of similar characteristics and age.

A key element of this formula is the calculation of the replacement cost of the asset. Replacement cost can simply be the cost today of replacing the asset with an identical one. However, when technology is changing rapidly, the existing asset may no longer be replaceable (e.g. it is no longer manufactured). In this case it is necessary to calculate the modern equivalent asset ("MEA") value which is the value of an asset with the same level of capacity and functionality as the existing asset. The issues relating to the calculation of MEA values for telecommunications operators are considered further below.

Deprival Value

Deprival Value ("DV") represents the recoverable value of the asset to the organisation; that is, the higher of the economic value the asset is likely to generate or the net realisable value ("NRV") of the asset if it were sold.

Economic Value

Economic Value ("EV") is a measure of the value of an asset based on the net present value of future cash flows.

The valuation rules can be summarised as follows:

If EV > NRV, the company will keep the asset in its current use.
If NRV > EV, the company will sell the asset now as the proceeds from the sale would exceed the economic value that it would be expected to generate from its continued use.

Therefore the deprival value or recoverable amount of the asset is the higher of EV and NRV. The current cost therefore is the lower of its deprival value and the net replacement cost. That is, the lower of the amount the company could recover from the asset and the cost to the company to replace the asset with an identical one.

6.2 Modern Equivalent Asset valuation issues

The adoption of CCA methodologies in telecommunications is complicated by the rate of technological change in the industry. This has implications in both identifying suitable replacement costs for old technology assets and ensuring the assets exhibit the same levels of functionality and capability.

Examples of technological issues for telecommunications operators include:

- Copper versus fibre cables;
- Analogue versus digital switches; and
- PDH transmission technology versus SDH technology.

The new technologies are usually far superior to the old technologies in terms of functionality and efficiency. However, since MEA values are required to reflect assets of equivalent capacity and functionality, it is necessary to make adjustments to the current purchase price and also the related operating costs - for example, the new asset may require less maintenance.

6.3 Current Cost Accounting adjustments

There are two alternative approaches to CCA. The approaches differ in their approach to "capital maintenance". That is, the manner in which the capital of the company is viewed when determining profit.

Capital can either be viewed in operational terms (i.e. as the company's capacity to produce goods and services) or in financial terms (i.e. as the value of shareholder's equity interest). These are known as operating capital maintenance and financial capital maintenance concepts respectively:

- Operating Capital Maintenance ("OCM") considers the operating capability of the company. Proponents of OCM assert that capital maintenance under this approach requires the company to have as much operating capability – or productive capacity – at the end of the period as at the beginning[9].

- Financial Capital Maintenance ("FCM") considers the financial capital of the company is maintained in current price terms. Capital is assumed to be maintained if shareholders' funds at the end of the period are maintained in real terms at the same level as at the beginning of the period[10].

As set out above, this concept is concerned with the maintenance of the productive capacity of the operator. One of the significant adjustments relates to the revaluation of fixed assets to current cost. Due to this revaluation additional adjustments are then

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[9] In efficient terms and in a long-run approach.
[10] For the capital as employed by an efficient operator.

required to restate depreciation amounts. These are identified below.

Revaluation of fixed assets

Under OCM the gross book value of assets is revalued to take account of specific price changes in the price of assets and changes in technology.

One way of calculating the current cost of assets is to apply specific price indices to the existing gross book value of assets. These may be derived from the company's procurement department. Alternatively, Modern Equivalent Asset ("MEA") valuation methods may be used. These base the value of assets on the current cost of modern equivalent assets subject to cost "abatements". These abatements are discussed further below.

Supplementary depreciation

The depreciation charge for the year is calculated on the basis of the new asset valuations. This ensures that the current cost of fixed assets consumed during the year is charged against revenue. For each asset, or group of assets, the OCM depreciation charge - assuming straight line depreciation - can be derived by dividing the gross replacement cost by asset life.

Supplementary depreciation is the difference between historical cost depreciation and current cost depreciation charge. It may be positive or negative depending on whether the value of assets is rising or falling. It is a charge against profits in the P&L account.

Illustration of these concepts

The tables below illustrates the above concepts for an asset purchased for £10,000. The assumed life of the asset is 4 years. For simplicity, it is assumed that the asset is depreciated on a straight line basis. In Table 6.1 it is assumed that the cost of replacing the asset falls by 10% per annum. Table 6.2, on the other hand, assumes that the cost of replacement increases by 5% per annum.

Table 6.1 Replacement cost falling by 10% per annum

Year	**Current Cost**	**Depreciation**					
		Current cost	**Historical**	**Supple-mentary**	**Cumulative**	**"Required"**	**Backlog**
0	10,000						
1	9,000	2,250.00	2,500.00	(250.00)	2,250.00	2,250.00	Nil
2	8,100	2,025.00	2,500.00	(475.00)	4,275.00	4,050.00	(225.00)
3	7,290	1,822.50	2,500.00	(677.50)	5,872.50	5,467.50	(405.00)
4	6,561	1,640.25	2,500.00	(859.75)	7,107.75	6,561.00	(546.75)

Table 6.2 Replacement cost rising by 5% per annum

Year	Current Cost	Depreciation					
		Current cost	Historical	Supplementary	Cumulative	"Required"	Backlog
0	10,000.00						
1	10,500.00	2,625.00	2,500.00	125.00	2,625.00	2,625.00	Nil
2	11,025.00	2,756.25	2,500.00	256.25	5,381.25	5,512.50	131.25
3	11,576.25	2,894.06	2,500.00	394.06	8,406.56	8,682.19	275,63
4	12,155.06	3,038.77	2,500.00	538.77	11,720.96	12,155.06	434.10

Derivation/explanation:

- Current cost is the gross replacement cost of the asset;
- Current cost depreciation is derived as the gross replacement cost divided by the asset life;
- Historical cost depreciation is the original acquisition cost divided by the asset life;
- Supplementary depreciation is the additional depreciation charged as a result of revaluing the asset (it can also be derived as current cost depreciation less historical cost depreciation);
- Cumulative depreciation is the sum of cumulative current cost depreciation as at the end of the previous period, backlog depreciation for the previous period and current cost depreciation for the current period. This is equivalent to required depreciation at the end of the previous plus current cost depreciation for the current period.
- "Required" depreciation is the cumulative depreciation that would have been charged given the current cost of the asset – put another way, it is the difference between the gross and net replacement cost of the asset; and
- Backlog depreciation is the difference between required depreciation and cumulative depreciation.

Under FCM there are similar adjustments to be made as in the OCM concept concerning the revaluation of fixed assets and supplementary depreciation. However, under FCM some of the treatments in terms of P&L need to be further adjusted to take into account of holding gains or losses that arise due to the effect of asset-specific inflation on the current cost value of assets and the effect of general inflation on shareholders' funds.

6.4 Which capital maintenance concept?

The above discussion has set out the main adjustments required to historical cost accounts in order to derive current cost information using OCM and FCM. It has been included to reflect the fact that the transition to LRIC from fully allocated historical costs as the basis for determining interconnection charges requires that assets are valued at their market value (or current cost). The use of current cost information is therefore a key aspect in helping to determine appropriate interconnection charges and special attention should be provided to the choice of capital maintenance as employed by an efficient operator. [11]

If OCM was used to determine charges, the revenue requirement[12] would be derived as the sum of operating costs, historical cost depreciation, supplementary depreciation and a return on net assets. Under FCM, the revenue requirement would be the sum of operating costs, historical cost depreciation, supplementary depreciation and a return on net assets less holding gains/losses plus the adjustment to shareholders' funds. Required revenue therefore differs depending on the capital maintenance concept used.

The use of the OCM concept may systematically incorporate insufficient or excess returns into the level of allowed revenue (depending, respectively, on whether asset-specific inflation was expected to be lower than or higher than general inflation). This is not a desirable feature of any regulatory regime, as it would not provide appropriate investment incentives. Therefore FCM is the preferred capital maintenance concept.

[11] Subject to the level of investment in assets being efficient.
[12] Defined as the level of revenue required in order to earn a reasonable return.