

ABC Costing Manual

2011-12

Copyright © Royal Mail 2011

Author: Andrew Lovell
Royal Mail Head of Costing

Date: September 2011

Version: 2011-1



Version Control

Version	Comments
1.0	Issued March 2011
2010-4	Issued July 2011
2011-1	Issued September 2011

Glossary

Term	Description
ABC Model	Activity Based Costing Model.
Activity Driver	A measure of the frequency and intensity of the demands placed on activities by products. It is used to assign costs to products.
Activity Module	A primary component of ABC Modelling, the activity module represents the activities undertaken by the organisation.
Attribute	Characteristics of resources, activities, and products. The attributes are held as static data but can be altered every time the model is run, if required to meet business needs.
Business Area	Tertiary organisational area of the business within a Business Unit, e.g. Delivery Office.
Business Sustaining	Management activities related to running the business.
Business Unit	Secondary organisational area of the business, e.g. Letters Operations.
Collection	Collection and acceptance of mail from post boxes, post offices and businesses.
Commercial	Marketing and Sales activity in the management of products offered to the retail market.
Cost Centre	The basic unit of responsibility in an organisation for which costs are accumulated. This could be a production or service location, function, activity or item of equipment.
Cost Element	Individual General Ledger account level detail, e.g. Basic Pay, Overtime, and National Insurance.
Cost Type	A grouping of similar cost elements, e.g. Pay, accommodation etc.
Customer	An individual, group of individuals or organisation that purchases Letter's products.

Term	Description
Delivery – Indoor	Sorting of the mail to specific delivery routes and then sequenced to final delivery point in preparation for the actual delivery to individual addressed delivery points.
Delivery – Outdoor	Taking the mail from the Delivery Office and delivering to the individual addressed delivery points.
Downstream Access	Other providers of mail services can bring their mail to Royal Mail for delivery to final destination.
General Ledger	Royal Mail use of the SAP R3 General Ledger system.
International Operations	Processing centre dealing with international import and export mail items.
Local Distribution	Distribution of mail between Mail Centres and Delivery Offices.
Letters	Letters business unit
Mail Centre (MC)	Processing centre dealing with single piece mail items.
Manager Grouping	A grouping of Payroll Grade Codes.
Network	Distribution of mail between Mail Centres, International Operations and RDCs moving the mail closer to its final delivery destination.
NIPOC	National Insurance Post Office Contributions.
Organisation Unit	Level at which cost centres and various driver data are grouped for purposes of calculations in the ABC Model, e.g. Chesterfield Delivery Office.
Pay Premium	A grouping of Payroll Cost Elements.
Perform Mailroom Management	Provision of mailroom services to businesses where their mail is prepared to meet internal sorting specifications.
Product	The products and services offered by Letters.
Product Module	A primary component of ABC Modelling, the product module represents the

Term	Description
	products, customers, countries and markets of the organisation (Outputs).
Regional Distribution Centres (RDC)	Processing centre dealing with bulk containerised mail.
Resource Drivers	A measure of the quantity of resources consumed by an activity.
Resource Module	A primary component of the ABC Model with the resource module representing the cost base of the organisation.
Routing Matrix	The Routing Matrix details the path products take through the pipeline.
SPHCC	Sales Product Handling Characteristic Combinations are sub-products of sales products.
SUPPOC	Employers Staff Pensions Contributions.
Support	General activities providing support to other business processes.
Walk Bundling Centre (WBC)	The preparation of unaddressed mail to Delivery Office walk.
Wholesale	Management of products offered to the downstream access market.

Contents

1.0	Introduction	10
1.1	Letters Operational Processes	11
1.2	ABC Overview	12
1.3	Maintenance Process	13
1.4	Audit Process	14
1.5	Change Control Process	14
2.0	Resource Module	15
2.1	Payroll System Expenditure Records	17
2.1.1	Consolidation of Payroll Grades	18
2.1.2	Consolidation of Payroll Accounts	18
2.1.3	Consolidation of Pay Expenditure Types	18
2.1.4	Employers National Insurance and Pensions Cost Reattribution Methodology	19
2.2	General Ledger Expenditure	21
2.2.1	Treatment of GL Cost Centres	21
2.2.2	Treatment of GL Expenditure Codes	21
2.3	Treatment of Vehicle Services	22
2.4	Non-staff Cost Types	23
2.4.1	Accommodation	23
2.4.2	Compensation	23
2.4.3	Computers	24
2.4.4	Consumables	24
2.4.5	Cost of Sales	24
2.4.6	Transportation	24
2.4.7	Bicycles	24
2.4.8	Consultancy	25
2.4.9	Customer Management	25
2.4.10	Depreciation	25
2.4.11	Finance	25
2.4.12	Holiday Pay Accrual	25
2.4.13	Interbusiness	25
2.4.14	Marketing	26
2.4.15	Miscellaneous	26
2.4.16	Non-Operational	26
2.4.17	Overseas Delivery and Transportation	26
2.4.18	Plant Maintenance	26
2.4.19	Postage	26
2.4.20	Staff Relocation	26
2.4.21	Staff Related Costs	27
2.4.22	Street Furniture	27
2.4.23	Uniforms and Workwear	27
2.4.24	Vehicle Costs	27
2.5	Entering Cost Adjustments	28
2.6	Maintenance of Resource Module	30
3.0	Resource Drivers	31
3.1	Operational Resource Drivers	32

3.1.1	Operational Staff Hours	32
3.1.2	Consolidated SHRS Drivers	32
3.1.3	Vehicle Hours	33
3.1.4	Machine Hours	34
3.1.5	Accommodation Square Metres	35
3.1.6	System Generated Consolidated Drivers	36
3.1.7	Costing of Services	36
3.2	Non-Operational Resource Drivers	37
3.2.1	Post Office Limited (POL)	38
3.2.2	Customer Management	38
3.2.3	Stamps and Collectables	38
3.2.4	Commercial	38
3.2.5	Financial Services	38
3.3	Maintenance of Resource Drivers	39
4.0	Activity Module	40
4.1	Business Processes and Activities	41
4.2	Classification of Activities	43
4.3	Maintenance of Activity Module	44
5.0	Activity Drivers	45
5.1	Operational Activity Drivers	46
5.1.1	Routing Matrix Drivers	46
5.1.1.1	SPHCC Weightings	48
5.1.1.2	Weighted Traffic Volumes	50
5.1.1.3	Derivation of Collection SPHCC Weightings	51
5.1.1.4	Derivation of Outward and Inward Mail Centre SPHCC Weightings	53
5.1.1.5	Derivation of Outward and Inward RDC SPHCC Weightings	53
5.1.1.6	Derivation of Delivery Indoor SPHCC Weightings	54
5.1.1.7	Derivation of Delivery Outdoor SPHCC Weightings	55
5.1.1.8	Derivation of International Operations SPHCC Weightings	57
5.1.1.9	Network	58
5.1.1.10	Local Distribution	58
5.1.2	Operational Direct One to One Mapping	59
5.2	Non-Operational Activity Drivers	59
5.2.1	Non-Operational Direct One to One Mapping	60
5.2.2	Post Office Limited (POL)	60
5.2.3	Customer Management	60
5.2.4	Stamps and Collectables	60
5.2.5	Commercial	60
5.2.6	Financial Services	60
5.2.7	Manage Services	60
5.2.8	Compensation	61
5.2.9	Services	61
5.3	Allocation of Overhead Activity Costs	62
5.3.1	Allocation Based on Pipeline	62
5.3.2	Allocation Based on Groups of Products	64
5.4	Maintenance of Activity Drivers	65
6.0	Product Module	66
6.1	Product Module Structure	66
6.2	Classification of Products	68

6.3	Products with no Cost	68
6.4	Universal Service Obligation (USO) Categorisation	68
6.5	Maintenance of Product Module	68
7.0	Class Costing	69
7.1	Assessment Approach	70
7.2	Deployment in ABC Model	72
7.2.1	Cost Types to Class Activities	73
7.2.2	Class Activity to Product	74
7.3	Class Costing – Third Class Approach	75
7.3.1	RDC	75
7.3.2	Collection	75
7.4	Maintenance of Class Costing	76
Appendix A Guiding Principles		77
Appendix B Methodological Principles		79
Appendix C Technical Appendices Contents		86

Table of Figures

Figure 1.1.i	Letters Operational Processes	11
Figure 1.2.i	Letters ABC Model	12
Figure 2.0.i	Resource Module	15
Figure 2.1.i	Payroll Cube Data Structure	17
Figure 2.1.ii	Transformation of Payroll Cube Data to ABC Payroll Record	17
Figure 2.1.4.i	NIPOC – SUPPOC Reattribution Illustration	20
Figure 2.2.1.i	GL Cost Centre to ABC Business Area Mapping	21
Figure 2.2.2.i	Illustration Of Mapping of GL Codes to ABC Cost Types	22
Table 2.5.i	Cost Adjustments	28
Figure 3.0.i	Resource Drivers	31
Table 3.2.i	Cost Types that are Directly Attributed to Activities	37
Figure 4.0.i	Business Process and Activity Hierarchy	40
Figure 4.0.ii	Activity Module	40
Table 4.1.i	Business Processes and Descriptions	41
Figure 5.0.i	Activity Drivers	45
Figure 5.1.1.i	Routing Matrix Illustration	47
Table 5.1.1.1.i	Weighting Factor Rules	49
Table 5.1.1.1.ii	Illustration of Industrial Engineering Analysis	50
Figure 5.1.1.2.i	Weighted Traffic Volume Illustration	51
Table 5.1.1.3.i	Collection Sub-Activities	52
Figure 5.1.1.7.i	Illustration of Delivery Proportions by Delivery Route	55
Figure 5.1.1.7.ii	Unmotorised to Motorised Switching Illustration	56
Table 5.1.1.7.iii	Delivery Outdoor Sub-Activities	57
Figure 5.2i	Activity mapped to single SPHCC	59
Figure 5.2ii	Activity mapped to many SPHCCs	59
Figure 5.3.1.i	Overhead Allocation	62
Table 5.3.1.ii	Pipeline Overhead Allocation Rules	63
Figure 5.3.2.i	Illustration of Overhead Allocation	64
Table 5.3.2.ii	Product Overhead Allocation Rules	64
Figure 6.0.i	Product module	66
Table 6.1.i	Size Tariff and Costing Options for Inland Products	67
Figure 6.1.ii	Illustration Of Product Hierarchy	67
Figure 7.0.i	Class Costing Methodology	69
Figure 7.2.i	Creating Class Activities	72
Table 7.2.1.i	Class Costed Cost Types by Business Process	73
Figure 7.2.2.i	Class Activity to Sales Products	74
Figure 7.2.2.ii	Activity to Products Assignment	74
Table 7.3.2.i	Saturday Collection Assessment Illustration	76

1.0 Introduction

Royal Mail processes and delivers around 70 million letters and packages per day to 28 million addresses each working day, in line with its unique Universal Service Obligation (USO) which is required under the Licence issued to Royal Mail in 2001, and more generally by the European Union. The Royal Mail Activity Based Costing (ABC) system (ABC Model) forms the basis of the businesses understanding of the cost of providing the range of products for both USO and non USO areas. As Royal Mail's cost accounting system, the outputs are used to inform the preparation of the Regulatory Financial Statements as required under Licence Condition 15.

The purpose of this document is to describe how the ABC Model is constructed, processed and updated, thereby providing transparency of the ABC methodology (calculation) that is applied in the cost calculation of the products provided by Royal Mail and as required by the Guiding and Methodological Principles⁽¹⁾. It then provides an overview of the Letter's processes, followed by a description of the ABC methodology through a descriptive walkthrough of the ABC Model itself using the key stages in ABC, namely;

- **Section 2:** Resource Module – details what business costs are used in the costing;
- **Section 3:** Resource Drivers – details how business costs are attributed to the activities;
- **Section 4:** Activity Module – details the business activities;
- **Section 5:** Activity Drivers – details how the activity costs are attributed to the outputs, i.e. products;
- **Section 6:** Cost Object Module – details the costed outputs; and
- **Section 7:** Class Costing – details the approach to class costing.

This document does not include any detail regarding the contents of the Regulatory Reporting Framework, nor does it include any of the input or output data relating to regulatory reporting.

1) Document available from www.psc.gov.uk and reproduced in Appendix A and Appendix B

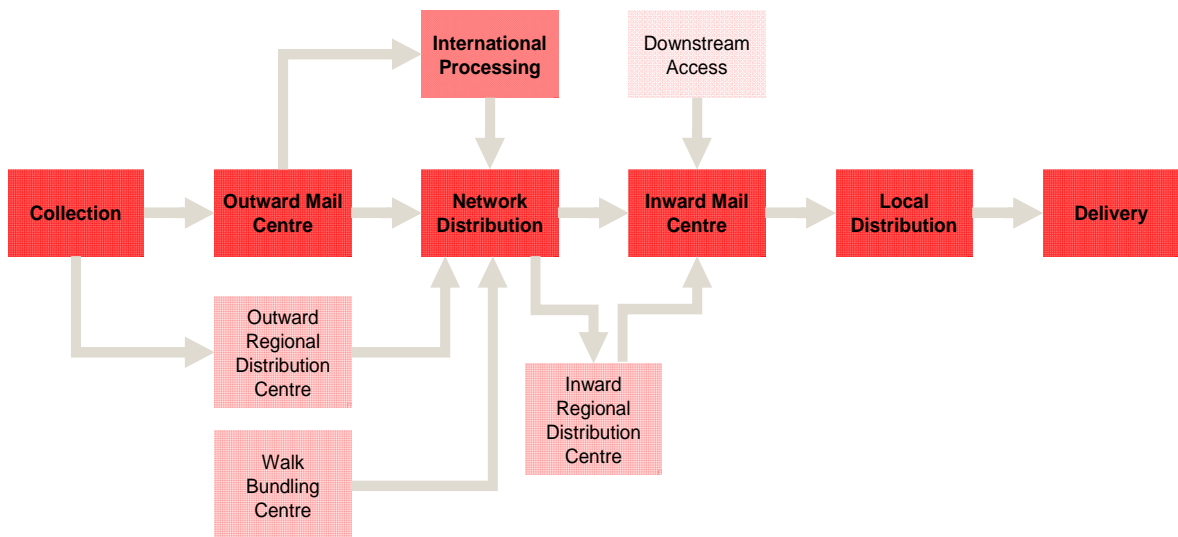
1.1 Letters Operational Processes

The ABC Model covers in detail all of the Letters processes within the operational pipeline. The operational pipeline includes:

- National coverage for daily collections from street boxes, post offices and customer premises across the UK;
- Processing involving mail sorting (including overnight in the case of all first class services);
- Distribution of mail between processing centres; and
- Final delivery of mail.

Figure 1.1.i provides an overview of the Letters operational pipeline.

Figure 1.1.i Letters Operational Processes



Mail can enter the operational process at a number of different points depending on the customer and how the mail is presented. Typically, mail is collected from a number of facilities including street pillar boxes and post offices (from Post Office Limited). Mail is also delivered direct to Inward Mail Centres from Downstream Access customers. Incoming International mail arrives at the International operations facilities, and Walk Bundling Centres (WBC) accepts unaddressed mail for processing prior to distribution to Delivery Offices. For business customers with large mail volume postings (Bulk sorted mail), these postings are accepted at Regional Distribution Centres (RDC) for processing before transfer to Mail Centres.

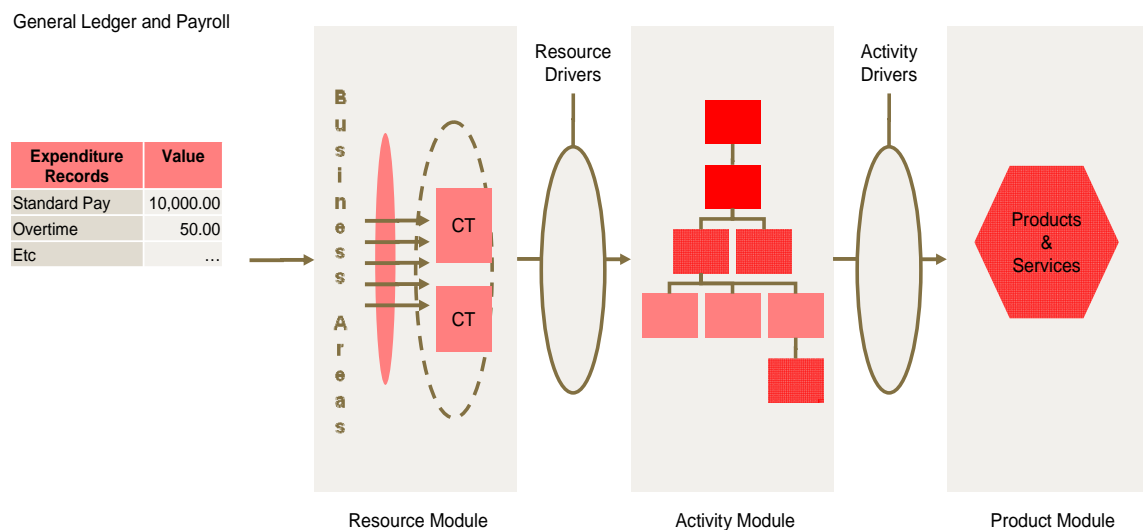
Mail is transferred around the country using the network routes of road, rail and air routes to achieve the necessary national distribution. On arrival at the Inward Mail Centre, the mail is further sorted to individual Delivery Offices and transferred via Local Distribution to the individual Delivery Office for final delivery. Some products are offered with a level of compensation available in the event of damage or loss (e.g. Special Delivery). To accommodate this discrete processing areas are utilised and transfers of items between operational sites are documented.

Mail that has an overseas destination is transferred to the International processing facility where it undergoes sorting, customs and security checks prior to despatch to either an air or sea port for transportation.

1.2 ABC Overview

ABC methodology is applied to the Letters business unit covering all the activities performed, the expenditure incurred and the Letters products provided. Figure 1.2.i provides an illustration of the ABC Model.

Figure 1.2.i Letters ABC Model



The ABC Model incorporates generic ABC principles, namely:

- It is the activities of the organisation that consume the organisation's resources; and
- It is the outputs of the organisation that determine the level of the organisation's activities.

The ABC Model is held on an SAP Business Warehouse (BW) platform and, where appropriate, links to the ABC Model are held on a SAP Business Warehouse (BW) platform and where appropriate, links to existing data sources held on the BW platform, which follows standard BW functionality by holding data stored in multidimensional cubes.

The ABC Model design consists of three major steps;

- **Data sourcing:** extraction of data from other business systems, e.g. General Ledger, Payroll;
- **Cost processing:** the actual calculation of data; and
- **Reporting:** the actual costs of activities and products.

The process undertaken in maintaining and populating the ABC Model is described in section 1.3.

An important constraint of the model design is that it calculates the national average cost for the activities performed and the average cost of the products handled. The cost calculated, of the average item, is consistent with the national tariff structure that is in place for the majority of the products provided by Letters. The ABC Model does not calculate the actual cost of a particular item of mail processed at a specific processing centre.

The ABC Model is built around the standard three modules, namely;

- **Resource Module:** the resources used in processing products and services, including, for example staff, vehicle, machine, property costs, etc.;
- **Activity Module:** the activities undertaken by the business including, for example, mail processing and delivery; and
- **Product Module:** the outputs (products) of the business activities, including, for example, first class letters.

The resources used by the business (e.g. cost of staff, vehicles, property) are attributed to activities using resource drivers. Resource drivers (e.g. staff hours) represent a meaningful basis of attributing the costs incurred to the activities that consumed those resources.

The activity costs, as calculated through the application of resource drivers, are attributed to products using activity drivers. An activity driver is a meaningful basis of attributing the activity cost to the products that were handled by that activity (e.g. sorting letters). All of these are explained in more detail in subsequent sections of this document.

The outputs of the ABC Model are used to support internal decision making and external reporting, in particular the Regulatory Reporting Framework. This document does not cover the details regarding the Regulatory Reporting Framework, but does cover the requirement for an annual examination of the ABC Model by an independent external auditor.

1.3 Maintenance Process

The deployed maintenance approach to data sets in the ABC Model is designed to meet two key requirements:

- Close alignment to operational reality; and
- The ABC Model processing schedule.

The ABC Model processes quarterly sets of data e.g. January – March, April – June, within 8 weeks of the quarter ending. Some business data is collected on a monthly basis in readiness for quarterly processing and is reviewed on receipt, testing for inconsistencies and new records. Additionally some data is captured annually and is input to the system as part of an annual data refresh in time for the first quarters processing.

As part of the data and system maintenance and governance process, the costing team are involved with a number of cross functional working groups and leverage knowledge from this network to understand the impact on the ABC Model from changes in operational activities and data sources.

The specific maintenance process relevant to each part of the ABC Model is described in the relevant sections below.

1.4 Audit Process

The ABC Model is subject to an annual external audit. This audit² evaluates the integrity of processes, as described, that underpin the data preparation and ABC Model calculations, which in turn are used to produce the annual Regulatory Statements.

The audit activity includes onsite visits covering the main suppliers of financial and non financial data used in the ABC Model, and the costing team as custodians of the ABC Model. These activities focus on the following key areas;

- **System Walkthroughs:** These replicate the mappings and calculations carried out when sourcing cost data from Payroll and the GL, and in creating the relevant resource drivers used by the ABC Model;
- **Reconciliations:** Reconciling cost data within the ABC Model to Payroll and the GL whilst also ensuring the ABC Model reconciles to the statutory accounts. Reconciliations are also performed to ensure costs within all modules of the ABC Model reconcile to each other;
- **Cost Adjustment Journals:** The ABC Model has the capacity to process journal entries recording costs at Business Area and Cost Type level. All cost adjustments are fully documented and are reviewed for consistency to prior quarters and to ensure the adjustment is completed as defined; and
- **Arithmetical Rules:** the audit includes a review of changes to data held in tables maintained in the ABC Model to ensure that any changes in the underlying data have been explained in relevant documentation.

1.5 Change Control Process

Royal Mail conforms to the requirements as set out in licence condition 15, paragraphs 15 and 16³.

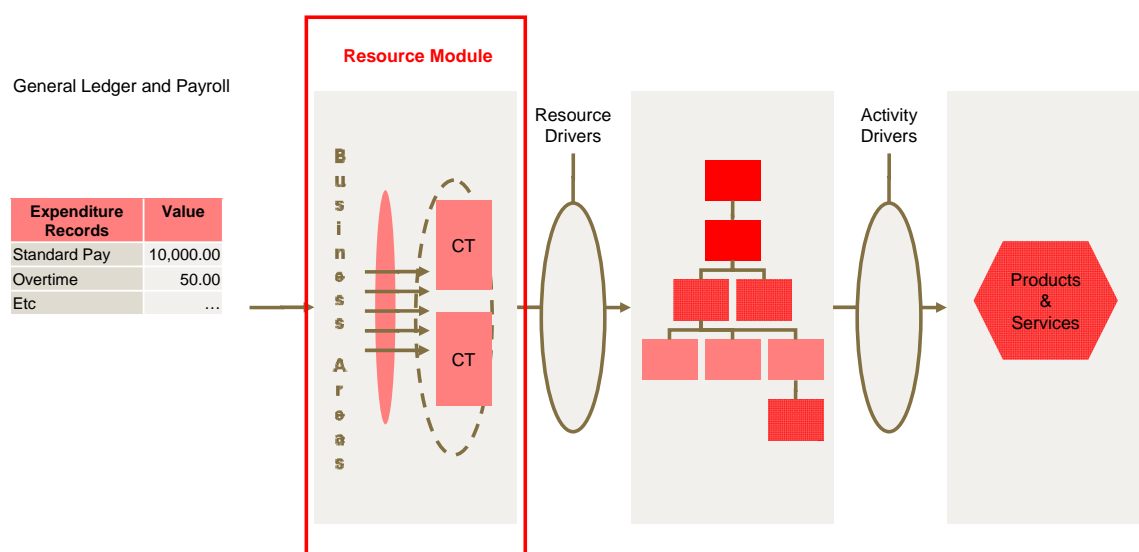
² The audit confirms that the audited section of the Regulatory Financial Statements has been prepared using the "Regulatory accounting principles and basis of preparation" as disclosed in the Regulatory Financial Statements and with the requirements of paragraph 4(a) of Condition 15 of the Licence.

³ Document available from www.psc.gov.uk

2.0 Resource Module

The resource module is a record of all the costs appropriate to the scope of the ABC Model for the products that are handled by the business activities. These costs can be broadly classified as being staff costs, non-staff costs and depreciation. Figure 2.0.i illustrates the area of the ABC Model that is being described in this section.

Figure 2.0.i Resource Module



There are two sources for expenditure records, namely the Payroll system for staff expenditure records and the General Ledger (GL) for non staff expenditure records including the statutory account system. Although the GL contains staff cost expenditure, it does not include sufficient detail on the type of staff expenditure, for example staff grade. The GL includes interbusiness transactions which are those from other businesses outside of Letters but within the Royal Mail Group e.g. Post Office Limited, Central Group Functions and iRED⁴. The interbusiness charge from POL covers the provision of counter services and mailwork. Counter services include the selling of products and collecting of revenues. Mailwork includes acceptance of mail volumes and the provision of accommodation facilities to enable local delivery activities to be performed. Central group functions covers areas such as treasury, communications and secretariat. iRED manages cost controls across a variety of printing and stationary requirements.

⁴ iRED is a wholly owned subsidiary of Royal Mail Group dealing with end to end document management.

The GL is constructed in a traditional way using a combination of cost centres and expenditure codes to record costs incurred and recognises that some of these costs may be incurred by Letters for activities that are relevant to other parts of Royal Mail Group. For example, Customer Services support both Parcelforce Worldwide and POL. The ABC System deals with this by attributing relevant trading business costs to trading business specific activities.

The GL makes use of secondary cost element functionality. Secondary cost elements are those which are created for internal allocation purposes. They are used for internal reporting only, do not affect the profit or loss of the company and are part of SAP standard functionality.

The ABC Model undertakes a series of consolidation exercises on the financial data from both of these source systems. The key reason for this is that the ABC Model is designed to calculate the average cost of activities and products; hence the granularity of much of the financial data is too detailed. Retention of the granularity of source data would only lead to processing unnecessarily large quantities of data.

Consolidating GL cost centres generates an aggregated business area view, where a business area represents a group of similar types of operating facility, for example Delivery Offices, or processing centres.

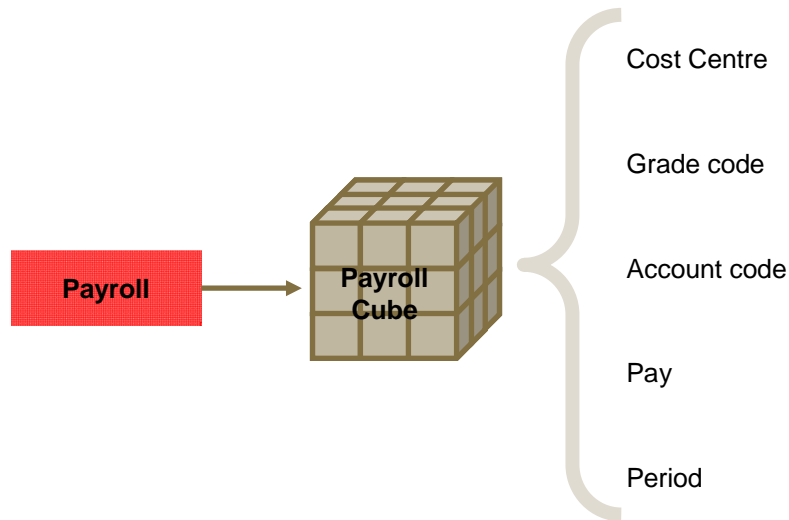
Consolidating expenditure records to ABC cost types is built on the principle of the application of common resource drivers to the expenditure records. Cost types represent the levels at which costs are attributed to activities within the ABC Model using the identified resource driver. For example, there may be twenty individual GL expenditure records to cover the general theme of accommodation expenditure. The floor space that each activity occupies/utilises within the building has been identified as an appropriate driver for attributing the accommodation costs of that building to the activities performed within that building. Given that the resource driver is the same for each of the individual expenditure records, there is little value in attributing twenty individual GL expenditure records when they could be combined into one cost type and attributed on a single basis.

This section is structured around the two sources of financial data, namely Payroll and GL and for each, the outcome of the consolidation of the financial data for use within the ABC Model is described.

2.1 Payroll System Expenditure Records

The payroll system is constructed based on pay records per employee. It is neither necessary nor appropriate to retain individual employee pay data for the purpose of activity and product costing. Therefore, the actual source of the payroll costs is not taken from the payroll system itself, but from the BW data cube that holds payroll expenditure used for business reporting. The format of the data held in the payroll cube is detailed in Figure 2.1.i.

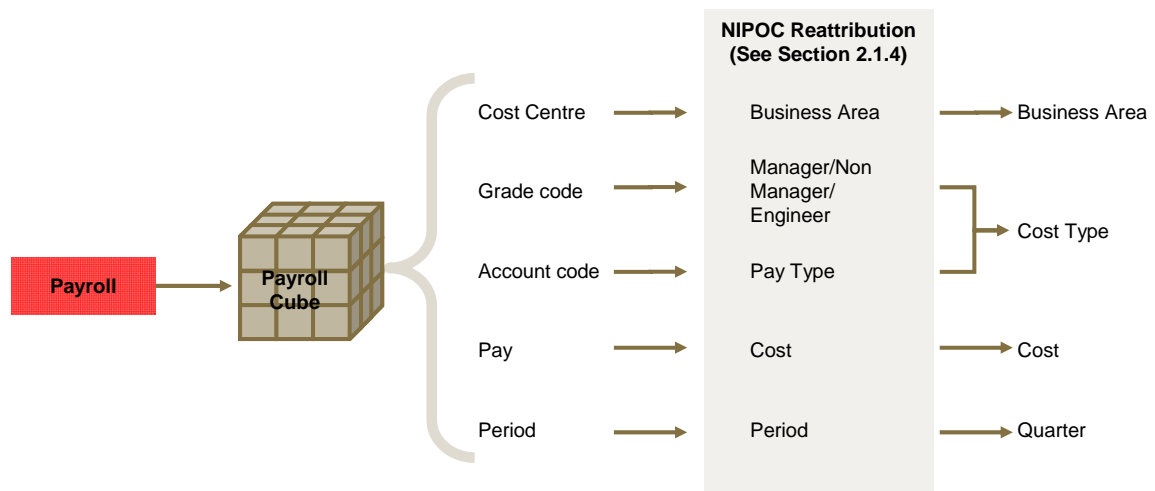
Figure 2.1.i Payroll Cube Data Structure



Data from the Payroll Cube requires further pre-processing before it can be used in the ABC Model which involves consolidation of pay grades and of pay expenditure types.

The transformation of the payroll cube records to those used in the ABC Model is detailed in Figure 2.1.ii

Figure 2.1.ii Transformation of Payroll Cube Data to ABC Payroll Record



2.1.1 Consolidation of Payroll Grades

The payroll system holds information on all pay grades. As would be expected, there are different rates of pay associated with different pay grades which reflects the terms and conditions that are applicable for roles within the business. The variation in pay rates reflects, for example, the type of role, the type of contract (full time, fixed term) and the geographical location of the role (e.g. London) etc. Much of these criteria have been deemed not relevant for the calculation of activity and product costs, primarily because the business operates on a national level and the pricing structure in place for the majority of our customers is based on a national tariff. The consolidation of payroll grades creates four staff grades for the ABC Model, namely manager, non manager, drivers and engineers.

The ABC Model contains a table which links the payroll grade code and staff grades.

2.1.2 Consolidation of Payroll Accounts

The payroll system holds information for all individual payroll accounts. The payroll accounts are consolidated into five pay types for the ABC Model:

- Pay;
- Shift;
- Driving;
- Employer National Insurance (NIPOC); and
- Employer Pensions (SUPPOC).

The National Insurance and pension costs are attributed, where appropriate, across the other pay types as a final consolidation process. For more detail please see Section 2.1.4

The ABC Model contains a table that links the payroll account code and pay types.

2.1.3 Consolidation of Pay Expenditure Types

The Payroll Cube is the source of staff pay costs used in the ABC Model except for agency staff and the accounting treatment of holiday pay accrual and IFRS pension's adjustment. For these three areas of staff cost the values are taken from the GL. The ABC Model uses the following staff cost types to consolidate payroll expenditure pay types;

- Pay manager;
- Pay non-manager;
- Pay manager shift;
- Pay non-manager shift;
- Pay driving supplement;
- Pay engineers; and
- Pay driving grades.

The ABC Model contains a table that links grouping of pay and pay types to cost types.

2.1.4 Employers National Insurance and Pensions Cost Reattribution Methodology

National Insurance contributions (NIPOC) are paid by Letters to build up employee's entitlement to certain social security benefits, including the state pension. NIPOC is payable on pay and allowances. Therefore to align this cost to the type of work carried out in incurring this cost, it is appropriate to reattribute it across these pay types.

Similarly the business makes payments towards an individual's pension (SUPPOC), though not all pay types are pensionable. Therefore, again to align this cost to the type of work that is carried out in incurring the cost it is appropriate to reattribute to those pay types that incur the cost.

Costs in the payroll cube are held by grade as detailed in Section 2.1.1 and account codes as detailed in Section 2.1.2.

NIPOC average rates are calculated annually for all staff grades. These rates are used in the allocation of NIPOC to other account types in the ABC Model by multiplying the costs associated with an account other than the standard pay code by the NIPOC rate and attributing the difference between these calculated costs and that posted in the ledgers to the standard pay code.

NIPOC and SUPPOC are attributed over the appropriate prime staff costs in line with PAYE directives and pay terms and conditions for each grade. These can be seen by reference to the worked illustration given below in Figure 2.1.4.i, which shows how NIPOC and SUPPOC are reattributed over pay, shift and driving.

Figure 2.1.4.i NIPOC – SUPPOC Reattribution Illustration

Grade	Ordinary Postal Grade
NIPOC %	9.5

Pay Type	Original Value	NIPOC Element		SUPPOC Element		Revised Value		
	0	1	2	3				
Pay	£500000.00	A	£33841.00	F	£24404.53	I	£558245.53	L
Shift	£12000.00	B	£1140.00	G	£585.71	J	£13725.71	M
Driving	£200.00	C	£19.00	H	£9.76	K	£228.76	N
NIPOC	£35000.00	D					£0.00	
SUPPOC	£25000.00	E					£0.00	
Total	£572200.00		£35000.00		£25000.00		£572200.00	

COLUMN 0 Shows original value for Postal Grade by five types.

COLUMN 1 Shows reattribution of NIPOC to pay, shift and driving using the following staged calculation.

- i $B * 9.50\% = G$
- ii $C * 9.50\% = H$
- iii $F = D - G - H$

COLUMN 2 Shows reattributed figure for SUPPOC to pay, shift and driving using the following calculation.

- i $(A / (A+B+C)) * E = I$
- ii $(B / (A+B+C)) * E = J$
- iii $(C / (A+B+C)) * E = K$

COLUMN 3 Shows pay, shift and driving with fully reattributed NIPOC and SUPPOC.

- i $L = A + F + I$
- ii $M = B + G + J$
- iii $N = C + H + K$

The ABC Model contains a table that links pay grouping and NIPOC rates used.

2.2 General Ledger Expenditure

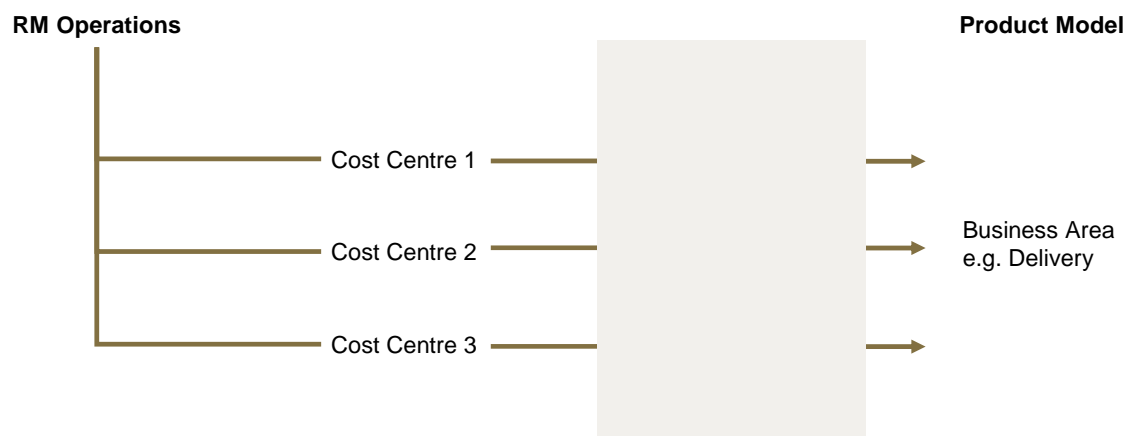
The GL is the source of the non staff expenditure postings used in the ABC Model.

The GL requires further pre-processing before it can be used in the ABC Model involving the consolidation of cost centres to business areas and of GL expenditure codes to cost types. These are discussed in detail below.

2.2.1 Treatment of GL Cost Centres

As detailed above, there are a large number of cost centres used in Letters. The cost centre records a geographical location's expenditure for each financial period. The mapping of these cost centres to ABC Model business areas is shown below in Figure 2.2.1.i.

Figure 2.2.1.i GL Cost Centre to ABC Business Area Mapping



The relevant table maintained in the ABC Model holds the mapping of GL cost centre to a business area code and an Organisation Unit.

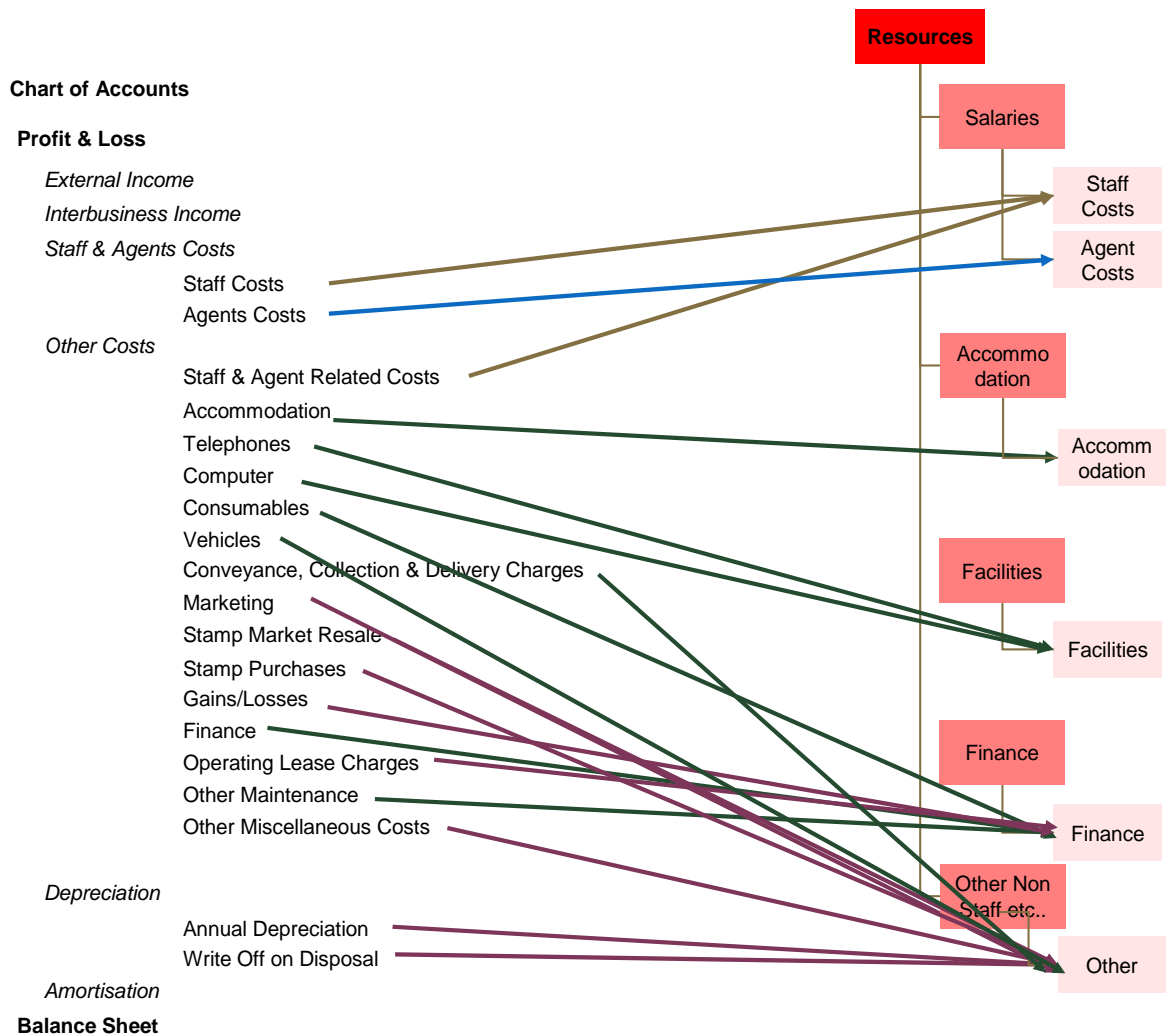
2.2.2 Treatment of GL Expenditure Codes

As outlined above, the GL has a large number of expenditure records available for use. These expenditure records are used to record actual business expenditure for each financial period. The purpose of the ABC Model is to provide the average activity and product costs. Working within these parameters the individual GL expenditure records have been mapped to a number of cost types. The cost types have a common theme for the type of expenditure being incurred, for example, vehicle costs and property costs. The development of these cost types is linked to;

- The identification of the resource drivers that should be used to attribute the costs to activities. This provides an optimum way for the resource module to be structured in the attribution of costs to activities;
- The retention of cost transparency, for both staff and non-staff, that is pertinent to one or more activities or products; and
- To support class costing.

However, for products where there is a discrete cost recorded in the GL, this level of detail needs to be retained to minimise arbitrary cost re-attribution further through the calculation of the ABC Model. Mapping of GL codes to ABC cost types is illustrated in Figure 2.2.2.i.

Figure 2.2.2.i Illustration Of Mapping of GL Codes to ABC Cost Types



The ABC Model holds the mapping of GL codes to cost type codes.

2.3 Treatment of Vehicle Services

For Vehicle Services, cost centre costs are not brought in from either Payroll or GL – costs are posted directly into the resource module (see Section 2.5 - Entering Cost Adjustments). This is done to maintain the alignment of costs to secondary cost elements.

2.4 Non-staff Cost Types

GL expenditure records are consolidated into a number of cost types. The following sections describe each of the cost types and explain their origin and purpose.

Some cost types are defined in order to allow for class costing, which relates to the treatment and allocation of costs to different classes of mail e.g. first class. Class costing within the ABC Model recognises that traditional ABC does not differentiate the class of mail being handled, attributing costs to products based on consumption of the underlying activity rather than recognising the relative demands of the service specification. The creation of cost types that support the class costing methodology are described in detail in Section 7.0 below.

2.4.1 Accommodation

This area of expenditure is covered by three individual cost types that represent indoor and parking accommodation, and machine power consumption.

Accommodation costs, as recorded in the GL, are mapped to indoor accommodation. A manual intervention as described in section 2.5 is then used to reallocate costs to two other cost types, differentiating between buildings and parking charges and the cost of running machines. The amount of costs that are allocated in this way has been calculated based upon analysis identifying the percentage of outdoor area to indoor and the appropriate market rates for outdoor accommodation and machine running cost by type of machine (as supplied by the Royal Mail asset team).

Property assets are managed by one business unit on behalf of Royal Mail Group. The costs of property assets are reported against each business unit that enjoys the benefit of those assets. The costs transferred cover a range of expenses from utility charges, waste management, cleaning, ground maintenance, catering facilities and property costs.

Property rental values are based on the sites facilities, and for costing purposes, the property rental charge includes indoor and outdoor areas.

The utility charges are recorded for the property facility, and no distinction is made on how the utilities are used. For costing purposes a share of the electricity costs are reported as Accommodation Machine Energy. This cost type is then assigned to activities that rely on machinery which clearly uses electricity during their operation. This provides a more appropriate cost distinction between mechanised and manual processing activities.

2.4.2 Compensation

There are two themes in this area, product compensation and non product compensation. The business incurs compensation expenditure in these distinct areas due to product service failures and injury or damage to employees, non employees or their property.

The ABC Model details this expenditure across four individual cost types, representing product and non product compensation and provision for quality of service compensation charges.

The Customer Management team manages product compensation claims. They retain the information of the products for which claims have been made and this informs the attribution of this cost to products (see Section 5.2.3). The cost type structure supports meaningful and appropriate attribution of costs to activities and products.

2.4.3 Computers

A single cost type – Computers includes the GL expenditure records for hardware maintenance, hardware non capital items and software. This covers all the businesses operational and administrative systems e.g. payroll and GL. The GL does not hold any details on the specific application of the computer spend, but the cost centre structure does in some cases provide a better insight as to which processes made use of these resources.

2.4.4 Consumables

This area of expenditure covers printing and stationary and other general administrative items.

2.4.5 Cost of Sales

Three individual cost types cover this area of expenditure, representing cost of sales and sales commission.

The GL expenditure records cover purchases made for resale and commission payments made to third parties for sale of stamps and the sale of any products listed in Letters product portfolio⁵. The cost type structure supports the attribution of cost of sales via discrete activities to products sold through this channel.

2.4.6 Transportation

The business incurs expenditure for a range of transport modes supplied through a number of different providers.

This area of expenditure is covered by seven individual cost types, representing couriers, air, rail, road and sea transportation.

2.4.7 Bicycles

This area of expenditure covers bicycles and handcarts, both of which are resources used within the Outdoor Delivery part of the operational process.

⁵ Letters A-Z guide to products and services is available from the Royal Mail website www.royalmail.com

2.4.8 Consultancy

A single cost type consolidates the GL expenditure records that cover many types of consultancy e.g. legal, financial, IT, audit and general. From a costing perspective the ABC Model does not differentiate between the types of consultancy as this does not generally relate to any specific part of the operational process or product. However differentiation in consultancy cost is maintained through the recording at business unit level. The combination of business unit and cost type ensures attribution to appropriate activities.

2.4.9 Customer Management

This area of expenditure is a single cost type covering expenditure items for the consumables (e.g. marketing materials) used in the provision of customer management support.

2.4.10 Depreciation

This area of expenditure is covered by four individual cost types, representing depreciation of fixtures and equipment, land and buildings, plant and machinery and amortisation of software systems and licences.

The business incurs depreciation charges for the capitalised assets for that business unit. GL expenditure records maintain a distinction by asset type, and this logic is maintained within the cost type structure. This supports an appropriate attribution of these cost types to activities that utilise the assets for which the depreciation is being incurred.

2.4.11 Finance

A single cost type consolidates the GL expenditure records ranging from foreign exchange costs, gains and losses, bank charges, accounting adjustments and insurance premiums. Differentiation in finance cost is maintained through the recording at business unit level. The combination of business unit and cost type ensures attribution to appropriate activities.

2.4.12 Holiday Pay Accrual

This area of expenditure is covered by two cost types and includes the accounting adjustment relating to the amount of employee holiday incurred and the amount owed. Under IFRS Royal Mail has an explicit requirement to create a holiday pay accrual. This expense is posted in Payroll, but for costing purposes the value is sourced from GL.

2.4.13 Interbusiness

This area of expenditure is covered by four cost types, representing interbusiness charges from associated business units including POL, Royal Mail Group and iRED, and a pension adjustment as required by IFRS.

Interbusiness refers to the internal transactions between different business units within the Royal Mail Group. The GL expenditure records cover the transactions between Letters and other Royal Mail Group business units for the provision of services e.g. the Post Office Limited counter services contract and the allocation of group costs.

2.4.14 Marketing

This area of expenditure is covered by three cost types, representing market research and marketing either of individual products or broader services.

The GL expenditure records cover marketing, media responses, exhibitions, advertising and market research expenditure.

2.4.15 Miscellaneous

A single cost type consolidates the GL expenditure records covering the remaining expenditure items that do not fall naturally into any other cost type and therefore have no specific resource driver requirements. Differentiation in miscellaneous cost is maintained through the recording of expenditure at business unit level. The combination of business unit and cost type ensures attribution to appropriate activities.

2.4.16 Non-Operational

This area of expenditure is covered by one cost type and covers expenditure items such as telephones which do not directly support operational processes.

2.4.17 Overseas Delivery and Transportation

This area of expenditure is covered by two cost types, representing charges made by administrations for the delivery and transportation of mail posted in the UK and destined for overseas.

2.4.18 Plant Maintenance

The GL expenditure records cover expenditure items that deal with the maintenance of equipment used for the sorting of mail including machine spare parts and engineers tools which are summarised into a single cost type.

2.4.19 Postage

This area of expenditure is covered by one cost type covering the purchase of stamps and official mail expenditure.

2.4.20 Staff Relocation

A single cost type consolidates the GL expenditure records covering items related to relocation and retraining costs of staff.

2.4.21 Staff Related Costs

A single cost type consolidates the GL expenditure records covering items in support of staff such as travel and subsistence, reward and recognition, and recruitment.

2.4.22 Street Furniture

Royal Mail's street furniture is part of the range of equipment supplied to support the collection and delivery of mail and includes street post-boxes. This area of expenditure is one cost type covering items such as the maintenance of post-boxes and delivery pouch boxes, though the costs associated with pouch boxes are small in comparison and are expected to reduce further with delivery methods.

2.4.23 Uniforms and Workwear

A single cost type consolidates the GL expenditure records covering the purchase and supply of staff uniforms.

2.4.24 Vehicle Costs

This area of expenditure is covered by two cost types, representing fuel and the maintenance or lease charges of vehicles.

2.5 Entering Cost Adjustments

The ABC Model has the capacity to process journal entries recording costs not sourced from the GL either to;

- Enter costs to a business area and cost type combination that cannot be sourced directly from either the Payroll or GL; or
- Move costs between business area and cost type combinations to allow for more appropriate ABC reporting, where better information is available over and above that sourced in the ledgers.

Few costs are processed in this way. However it is an essential capability of the ABC Model to bring in necessary and appropriate costs to maintain the integrity of the costing outputs through appropriate attribution of costs to products. All cost adjustments are fully documented and form part of the ongoing external audit activity.

A full list of journal entries is shown in Table 2.5.i.

Table 2.5.i Cost Adjustments

Name	Frequency	Description
Fleet and Maintenance Services	Quarterly	This entry is used to facilitate the use of secondary cost elements held in the GL for vehicle services and facilities asset management.
Accommodation	Quarterly	This entry reassigns accommodation costs from indoor to outdoor and machine energy cost types.
GL Reconciliations	Quarterly	This is part of the standard process to compare the GL extract as taken into the ABC Model to the numbers reported in the statutory accounting system for the Letters business unit. Any differences are entered ensuring that the ABC Model aligns to the values within statutory reporting.
Customer Management	Quarterly	This entry moves Customer Management costs between the various business units it services.
Bad Debt Provisions	Quarterly	This entry transfers bad debt provisions to the Revenue Management business area.
Depreciation	Quarterly	This entry transfers depreciation charges to the appropriate business area.
Courier Services	Quarterly	Charges for the Royal Mail Courier

Name	Frequency	Description
		Service are posted directly to the statutory accounting system and not the Letters GL. Therefore this entry brings the costs into the ABC Model.
Indirect Controllable Costs Recovered (ICC)	Quarterly	This entry moves Group Technology, Human Resources and Finance costs between the various business units they service.
Royal Mail Eliminations	Quarterly	This entry eliminates the Interbusiness postings for Group Technology, Human Resources and Finance costs between the various business units they service as the prime costs are used instead.
VAT	Quarterly	This entry identifies the amount of recoverable VAT that is required to be moved from exempt products to standard or zero rated.
AMU	Quarterly	This entry records the Income Statement expenditure items relating to the Address Management Unit (AMU).
IB Overhead	Quarterly	As part of the Business Restructuring, overhead assignments (Group functions that have since moved into Letters) within Letters P&L were ceased in year beginning 2011/12. This uses the underlying calculation to reproduce them in the ABC Model to ensure appropriate attribution of costs to products.
Cost Movements	Ad-Hoc	This entry moves costs between business areas to ensure an appropriate resource driver attribution.
Post Year End Costs	Annual	This entry deals with the posting of costs in the GL following the closure of Period 12 accounts.
Postcomm Compensation	Annual	This entry records the full year values because any postings during the year are excluded from the ABC Model.
Parcelforce Worldwide Interbusiness	Annual	This entry ensures that the ABC Model aligns to the values within statutory reporting.

2.6 Maintenance of Resource Module

The resource module is a record of all the costs appropriate to the scope of the ABC Model. As described in this section, there are two principal sources for the expenditure records, namely the Payroll system for staff expenditure records and General Ledger (GL) for non staff expenditure records.

There are a series of consolidation routines that the ABC Model applies to the source expenditure data. These routines rely upon a number of mapping tables which need to be maintained to ensure that all source expenditure records are treated in an appropriate way. The mapping tables hold the alignment of source system codes to ABC codes.

The mapping relationships that are maintained are between the following source systems and the ABC Model elements;

- Source system cost centre to ABC business areas;
- Source system GL codes to ABC cost types;
- Source system payroll account code to pay type and cost type; and
- Source system payroll grade code to ABC staff grade.

These mapping relationships are maintained on a quarterly basis reflecting the actual data sourced for that time period.

NIPOC and SUPPOC percentages are re-evaluated on an annual basis based on applying the previous year's actual results.

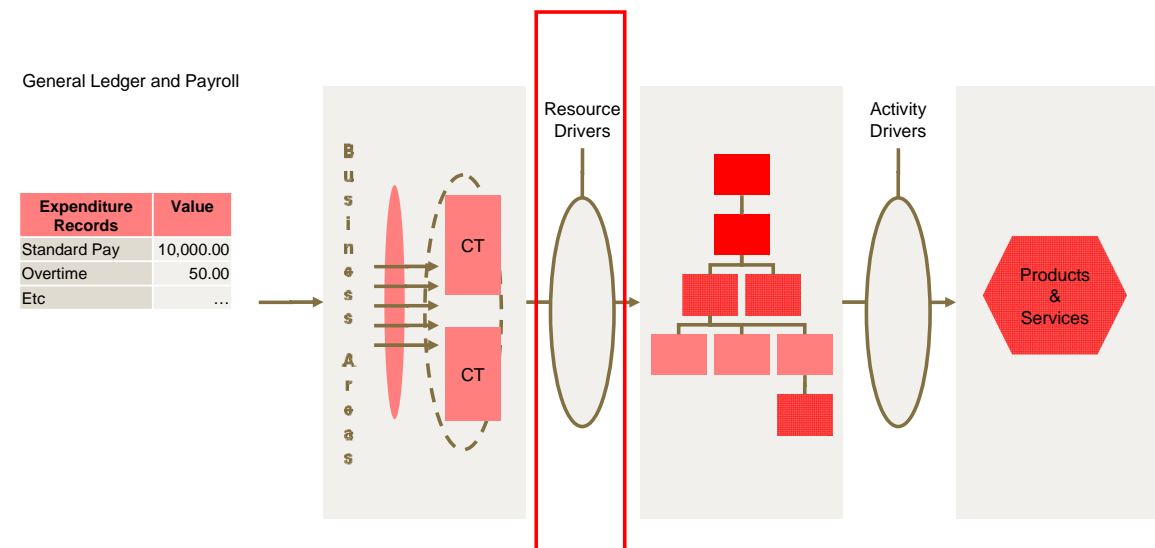
Cost adjustments are reviewed each quarter for appropriateness.

3.0 Resource Drivers

The purpose of resource drivers is to attribute the resource costs, (as detailed in section 2), to the business activities (see section 4) in a meaningful way, thereby recognising the causality of the level of resource being incurred.

Figure 3.0.i illustrates the area of the ABC Model that is being described in this section.

Figure 3.0.i Resource Drivers



Resource drivers fall into five categories:

- Operational staff hours;
- Vehicle hours;
- Machine hours;
- Accommodation square metres; and
- Direct to activities.

This section describes each of these categories in turn. Resource drivers for class costing methodology are developed as part of this stage of the ABC Model, (See Section 7 Class Costing).

The ABC Model contains a table that links cost types and associated resource drivers.

3.1 Operational Resource Drivers

3.1.1 Operational Staff Hours

Operational staff hours are sourced from the business operational staff hour recording system (SHRS). This is used to record both the actual hours worked and the type of work performed by Operational Postal Grade (OPG) staff in each of the operational sites (e.g. Mail Centres, RDCs etc). Hours are collected for the same time period as the costs that are being attributed to activities.

The SHRS holds the base data on an individual unit basis for every operating unit in Letters in total hours and split by work task. The SHRS also provides input to Letters weekly financial performance reporting which forms part of the management control and performance review.

The type and amount of work performed in each of the operational areas, such as collection, processing and delivery is recorded through the use of work tasks (that is, individual tasks and activities performed as part of an employee's job). Each OPG job profile is constructed with reference to these work tasks which therefore provides a standard level of resource, by work task, for the OPG staff. It is this standard that is reviewed and amended to reflect operational reality and the actual hours and work tasks performed for a defined period.

Each work task is mapped to an ABC activity, and SHRS cost centres are mapped to business areas. The ABC Model takes the data and calculates the operational hours by activity.

For operational areas, the cost types that use operational staff hours as a resource driver are;

- Pay – non-manager;
- Pay – non-manager shift;
- Staff relocation;
- Staff related costs;
- Uniforms and workwear;
- Pay;
- Cycles;
- Pay – driving premium; and
- Pay – driving grades.

The ABC Model contains a table that links activities to operational processes.

3.1.2 Consolidated SHRS Drivers

There are a number of cost types that need to be attributed to pipeline activities, (e.g. collection, processing and delivery), but these activities do not have SHRS hours recorded against them. One such example is the management activity for a given pipeline segment.

To provide a meaningful basis for attribution, SHRS hours for pipeline activities are consolidated at pipeline process level. For operational areas, the consolidation of hours by pipeline process then provides a profile to apply to a number of cost types including those associated directly with the management of the pipeline area;

- Pay – manager; and
- Pay – manager shift;

In addition to the staff cost, the following non staff costs are attributed on this basis;

- Computers;
- Consumables;
- Couriers;
- Miscellaneous;
- Non-operational, e.g. non-staff costs including phones;
- Interbusiness miscellaneous; and
- Consultancy.

These cost types are a reflection of the resources used and controlled in support of the operational area and are therefore appropriate to be attributed to the management activity for that operational area.

All ABC Model operational activities are mapped to a management activity dependant on the operational area the activity is performed in. The management activities are related to;

- Collection;
- Outward processing;
- Network;
- RDC;
- Inward processing;
- Local distribution;
- Delivery; and
- Inward office of exchange.

The ABC Model consolidates all the SHRS operational hours by work task to these management activities and the total is used to assign the cost types costs to the management activities.

3.1.3 Vehicle Hours

Vehicle related hours are taken from the SHRS to generate the vehicle analysis for each business area. This data is collected for the same time period as the costs that are being attributed to activities and represent the actual hours incurred.

Vehicle costs are obtained by operational area from the GL. Costs are grouped by business area, and are attributed to vehicle activities using the total number of vehicle hours associated with each business area.

The vehicle fuel cost type is only attributed to activities that relate to driving. The cost types that use vehicle hours as a resource driver to operational activities are;

- Accommodation – outdoor;
- Depreciation – vehicles;
- Vehicles' fuel; and
- Vehicles.

Operational processes and associated activities that are related to vehicles are identified and then linked, where appropriate, to these cost types.

3.1.4 Machine Hours

Machine hours are used to reflect the differing cost consumption of the various types of plant and machinery. Data is extracted periodically on the number of;

- Items of plant and machinery by location;
- Hours in use by activity; and
- Hours not in use by activity.

Plant and Machinery expenditure is recorded at operational area level in the GL. Costs are grouped by business area, and are linked to machine activities using a weighted measure of machine hours associated with each business area.

The weighted measure of machine hours is generated by taking the number of plant and machines by type and multiplying this by the Machine Type weighting for each cost type. The Machine Type weighting for each cost type is calculated as follows:

- **Accommodation Machine Energy:** the typical energy in KWh consumed during operating hours (based on data obtained from the manufacturer's data);
- **Machine Depreciation:** the annual depreciation cost of operational equipment by type of machine, as recorded in the GL in the prior year;
- **Engineers Pay:** the number of hours spent each year by engineers maintaining machines, by type of machine, based on data from the prior year; and
- **Machine Maintenance:** annual cost of spare parts used in maintenance and repair, by type of machine, based on data from prior year.

The weighted number of plant and machines is then multiplied by the machine hours by activity to give the weighted driver quantity.

Cost types that use Machine Hours as a resource driver to operational activities are;

- Accommodation machine energy;
- Machine depreciation; and
- Machine maintenance.

It should be noted that the cost type Accommodation Machine Energy is only driven to operating machine activities and not the machinery non running time activities.

To illustrate how the weighted machine drivers are calculated assume that the;

- 'Eastern' Mail Centre organisational unit has one integrated mail processor (IMP);
- 'Northern' Mail Centre organisational unit has one letter sorting machine (LSM);
- The IMP was used for 100 hours at the 'Eastern' Mail Centre and the 'Northern' Mail Centre used the LSM for 100 hours; and
- The IMP weighting factor is 3.9 and the LSM weighting factor is 1.9.

Then the calculation for the weighted machine hours for the LSM and IMP for machine energy would be as follows.

Org unit	Machine type	Activity	No of machine types (A)	WF (B)	Hours (C)	Weighted machine hours (AxBxC)
Eastern Mail Centre	LSM	Outward LSM Operation	1	1.9	100	190
Northern Mail Centre	IMP	Outward IMP Operation	1	3.9	100	390

The ABC Model contains a table which links machine type activities, showing a usage percentage where usage is split between activities.

A further table holds machine type together with relevant weighting factors by the cost types Machine Energy, Deprecation, Engineers Pay and/or Machine Maintenance, where relevant.

3.1.5 Accommodation Square Metres

Accommodation cost types are attributed using the resource driver Accommodation Square Meters. For each organisation unit, accommodation analysis is supplied as part of the annual data update and as part of this process, details on the square metres each activity occupies is provided.

For example, if the total space in a Delivery Office is equal to 750m² and the Delivery Office has three distinct work areas which take up the following amount of space:

- Inward sortation of mail for delivery – 300m²;
- Preparation of mail for delivery - 375m²; and
- Callers office work – 75m².

Then the inward sortation of mail for delivery activity would be assigned 40% of the cost (300/750), preparation of mail for delivery would be assigned 50% of the cost (375/750) and callers office work 10% of the cost (75/750).

The driver quantities come from two sources:

- Data on accommodation provided by Letters and updated annually; and
- Dynamic data for organisational units in the delivery business area.

The Accommodation Square Metres resource driver is used for the following cost types:

- Accommodation – indoor;
- Depreciation – fixtures and fittings; and
- Depreciation – land and buildings.

The system identifies operational processes and associated activities that are related to accommodation or depreciation and whether they are related to the cost types listed above.

3.1.6 System Generated Consolidated Drivers

The ABC Model reviews costs for all business areas and identifies if a valid driver exists for the costs recorded against that business area. If a valid driver does not exist then the ABC Model generates that driver.

The drivers generated are based on either SHRS hours, vehicle hours, machine hours or accommodation square meters as described above. The driver data is sourced from a group of business areas identified as having an organisational link to the business area requiring a resource driver.

This methodology ensures that there are no costs left unattributed to activity in the resource module.

The integrity of system generated consolidated drivers is established by an off system manual replication of their calculation. This exercise forms a structural part of the external audit activity.

3.1.7 Costing of Services

Many Letters services make use of operational activities. However, typically, services are not directly associated with items of mail. A resource driver is created to allocate the relevant costs within the activity module to specific services.

This is achieved by identifying the average usage a service makes of an activity by reference to Industrial Engineering Planning Values.

These are either maintained as described in section 5.1.1.4 or by commissioning an Industrial Engineer to carry out a time and motion study for the relevant service. The resource driver for this usage, for example, could take the form of the number of contracts maintained or the number of times the service is carried out.

These resource driver volumes are then sourced by period and multiplied by the time taken to carry them out, which calculates the total time required for the services. This time is transferred from relevant ABC Model activities and posted against a single or a number of new, service specific, activities.

3.2 Non-Operational Resource Drivers

There are a number of cost types where the resource driver is directly mapped to one or more activities. This direct mapping has been selected for a number of cost types as it is deemed that the resource drivers described above are not appropriate for these cost types. Table 3.2.i below details the cost types that are driven directly to activities.

Table 3.2.i Cost Types that are Directly Attributed to Activities

Description of cost type
Air Conveyance
Compensation – Non-product
Compensation – Product
Conveyance/Couriers
Cost of Sales
Finance
Interbusiness
Market Research
Marketing Above The Line
Marketing Below the Line
Overseas Delivery
Postage
Rail Conveyance
Road Conveyance
Sea Conveyance
Owner Drivers
Overseas Conveyance
Customer Management
Compensation International Product
Street Furniture
Compensation Provision
Inter BU/Overlay
Stamp Sales Commission
IFRS – Pension Adjustment
Holiday Pay Accrual FY
Spring Commission
Amortisation

In addition there are a number of business areas (e.g. Walk Bundling Centre) for which a direct to activity mapping is used. Specifically, direct drivers are created to allocate cost to discrete activities.

3.2.1 Post Office Limited (POL)

The Interbusiness charge from POL covers the provision of counter services which include the selling of products and collecting of revenues and mailwork which includes accepting mail and the provision of accommodation facilities to enable local delivery activities to be performed. The resource driver values are defined by the POL management report which is supplied periodically to Letters.

3.2.2 Customer Management

The Customer Management team provide support to our customers via Call Centres and postal enquiries. Typically, enquiries from our customers relate to product pricing, service failures and lost or damaged items of mail. The cost of Customer Management is split to three business areas as described in section 2.5, relating to Letters, POL and Parcelforce Worldwide. The costs held against these business areas are then mapped directly on a one to one basis to three activities representing the three business units and then to SPHCC based on a profile supplied by Customer Management.

3.2.3 Stamps and Collectables

The Stamps and Collectables main function is providing philatelic services to stamp collectors. In addition, they also provide stamps to large customers including retailers. Costs are attributed to an activity based on management information supplied by the Stamps and Collectables team.

3.2.4 Commercial

The Commercial team provides sales, pricing and marketing support for Letters. Resources consumed by the Commercial team are mapped to a number of activities reflecting Commercial's organisational structure.

3.2.5 Financial Services

Financial Services hold the costs of all the financial operations for Letters including accounts payable and receivable. Resources consumed by the Financial Services team are mapped to a number of activities reflecting Financial Services organisational structure.

3.3 Maintenance of Resource Drivers

Resource drivers are applied to the cost types to ensure that costs incurred are accurately attributed to activities. Resource drivers developed fall into five categories, namely;

- Operational staff hours;
- Vehicle hours;
- Machine hours;
- Accommodation square metres; and
- Direct to activities.

The operational staff hours and vehicle hours are sourced from the SHRS for a given period. The SHRS to activity mapping relationship is maintained to ensure that all relevant operational hours are mapped to an activity. The mapping of SHRS work tasks to activity may require a new activity to be created and new activities will need to be classified by pipeline segment and as either attributable or overhead (see section 4.2).

Machine Hours are analysed on an annual basis with a quarterly review to ensure they are aligned to operational activities. Machine weightings are reviewed annually with reference to the asset register, maintenance schedule, and expenditure of machine parts.

Accommodation Square Metres are analysed with reference to the overall total property square metres, number of machines and pieces of equipment in place, and their standard footprint. This review creates a profile which is used for the following twelve months.

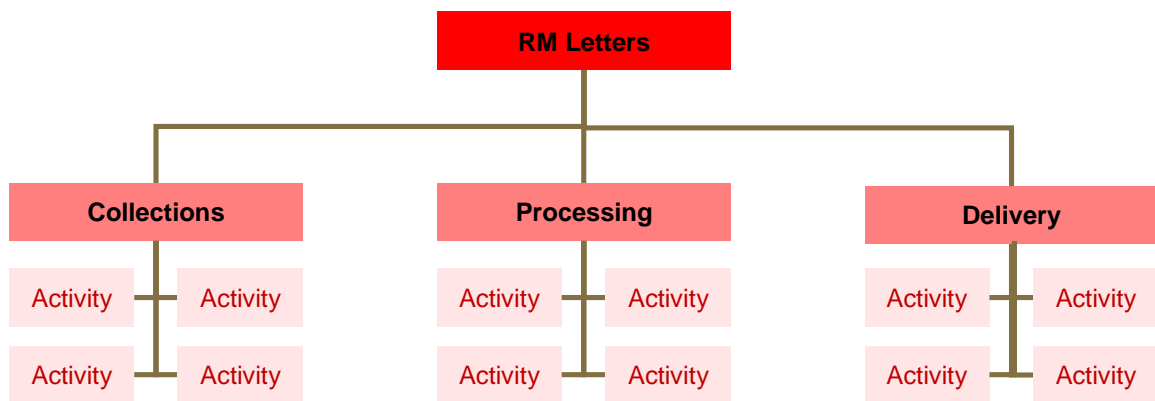
Direct drivers are maintained on a quarterly basis and updated to reflect any new cost types that require a direct resource driver.

Class costing resource drivers are maintained to reflect any change to cost types that require class costing (see Section 7.0).

4.0 Activity Module

The activity module holds the business processes and activities, populated with resource costs using the resource drivers (as detailed in Section 3). The business has a number of operational commercial and support processes. A hierarchical structure exists between the business processes and activities, as illustrated in Figure 4.0.i.

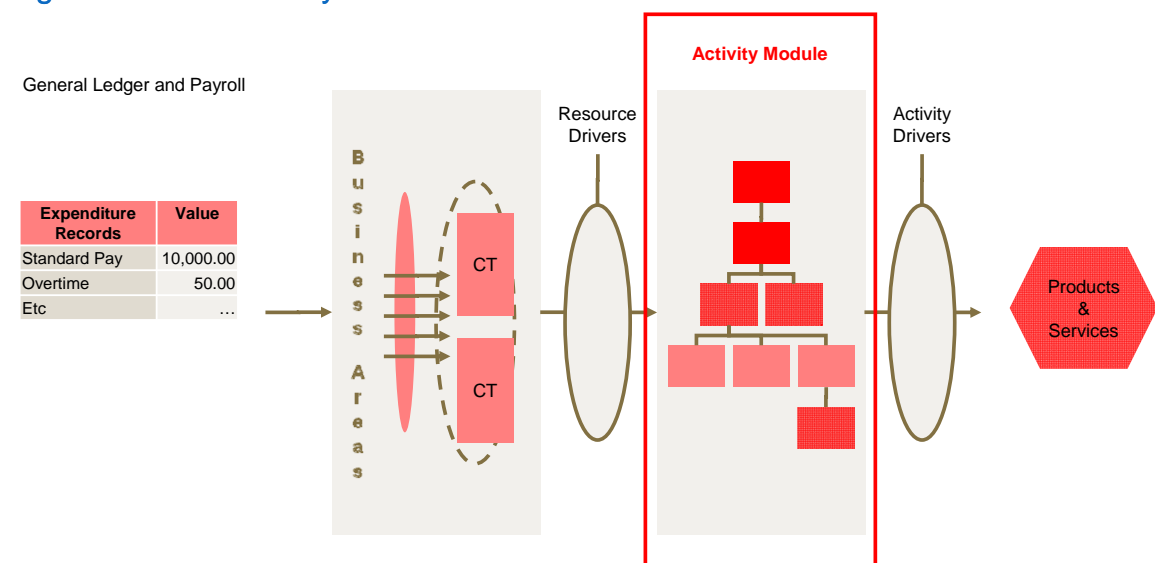
Figure 4.0.i Business Process and Activity Hierarchy



The number of activities within each business process varies and is to some extent a reflection of the business data available. The activity module has a number of business processes detailed across approximately five hundred activities.

Figure 4.0.ii illustrates the area of the ABC Model that is being described in this section.

Figure 4.0.ii Activity Module



This section outlines the business processes that are used in the ABC Model, the classification of activities and how these classifications support cost attribution methodologies.

4.1 Business Processes and Activities

For costing purposes, processes and activities have been defined so as to achieve two clear objectives;

- To reflect the actual business processes and activities; and
- To provide a meaningful basis for attributing costs to both activities and products.

The high level business processes are described in Table 4.1.i shown below.

Table 4.1.i Business Processes and Descriptions

Business process	Description
Collection	Collecting and accepting of mail from post boxes, post offices and businesses.
Outward – Mail Centre	Mail processed for onward despatch around the country to other Mail Centres.
Regional Distribution Centres (RDC)	Mail processed for onward despatch to RDCs or Mail Centres around the country.
International Operations	Mail processed for export and despatch for overseas delivery or import mail processed for despatch around the country to other Mail Centres.
Network	Distribution of mail between Mail Centres, International Operations and RDCs moving the mail closer to its final delivery destination.
Inward – Mail Centre	Mail processed for onward despatch to local Delivery Offices.
Local Distribution	Distribution of mail between Mail Centres and Delivery Offices.
Delivery – Indoor	Sorting of the mail to specific delivery routes and then sequenced to the final delivery point in preparation for the actual delivery to individual addresses.
Delivery – Outdoor	Taking the mail from the Delivery Office and delivering to the individual

Business process	Description
	addresses.
Perform Mailroom Management	Provision of mailroom services to businesses where their mail is prepared to meet internal sorting specifications.
Walk Bundling Centre	The preparation of unaddressed mail to delivery walks.
Support	General activities providing support to other business processes.
Commercial	Marketing and Sales activities relating to products offered to the retail market.
Wholesale	Management activities relating to downstream access.
Business Sustaining	Management activities related to running the business.

To meet these objectives, the ABC activity dictionary has a number of activities that are used specifically to collect discrete costs, as recorded in the GL, that are relevant to one or more products. For example, the national distribution of products is achieved using a combination of resources including road, rail and air, which collectively make up the process of Network. However, only specific products use air transportation routes, and for this reason the cost of air transportation, as recorded in the GL, is retained through creating an activity against which the GL costs can be recorded. This approach supports a more transparent and appropriate attribution from activity to product in the third stage of the ABC Model calculation.

ABC operational pipeline activities are similar to those described within the SHRS. The SHRS provides an analysis of operational tasks, thereby providing a dynamic alignment to actual business activities as referenced in Section 3.1.

The Operational Postal Grade (OPG) resources are managed by Operational Managers and for ABC purposes, generic management activities have been created for each section of the operational pipeline. These management activities reflect the costs of management including other non staff operational unit costs appropriate to that part of the operational pipeline. The list of management activities include those related to;

- Collection;
- Inward office of exchange;
- RDC;
- Outward processing;
- Network;
- Inward processing;
- Local distribution; and
- Delivery activities.

For commercial activities which are outside of the operational pipeline, ABC Model activities have been developed to reflect the way the Commercial team organise their resources in terms of customer groups, product groups and marketing activity. For example, the cost centres relating to the management of stamps is mapped to the manage stamps activity.

All other activities have been created to reflect the existence of other business activities outside of the operations and commercial areas. The activities then attract the costs for the business process they represent, for example the activity Letters Human Resources reflects the cost of the Human Resources function within Letters.

The ABC Model activity code has been designed to provide information on the purpose of the activity itself. The activity code is made up of the following three elements;

- Prefix which generally indicates part of the business it represents, e.g. Operations, Commercial;
- Numerical value which is a unique identifier; and
- Suffix which generally indicates a specific attribution treatment for cost types within that activity, e.g. class costing.

4.2 Classification of Activities

Each ABC activity has two classifications, which are used for both the cost attribution methodology and reporting purposes. These are:

- **Pipeline Segment Classification:** each of the activities is linked to a business process, referred to as pipeline segment (see Table 4.1.i); and
- **Attributable or Overhead Classification:** each of the activities is classified as either:

- **Attributable activities:** defined as activities that have a direct cost relationship between the activity costs and the outputs of that activity. Attributable activities can be either pipeline or non-pipeline.

The criteria followed in identifying the which classification to use is as follows;

- 1) Does the activity deal directly with the processing or movement of products; If so the activity is defined as pipeline attributable.
- 2) Is the activity directly in support of the selling, marketing or management of a product or defined group of products; If so the activity is defined as commercially attributable.

- **Overhead activities:** defined as any activity that has no direct cost relationship between the activity and the outputs.

Therefore the Overhead classification identifies which activities are subject to the overhead allocation methodology (see section 5.3).

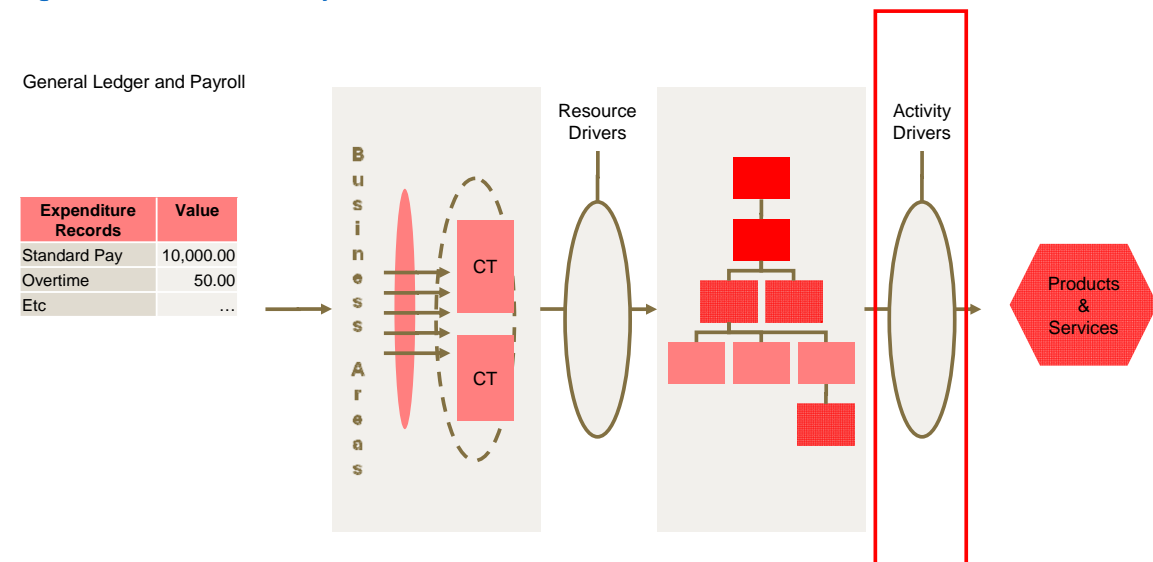
4.3 Maintenance of Activity Module

Maintenance of activities is achieved in part through the resource driver SHRS maintenance routine. In addition, the business may request a change in the level of detail of a particular process area, in which case a new activity would need to be created or removed. In the case where this is an operational activity, then a new SHRS element is also required to measure the activity resource level. In the case of a deleted activity the relevant SHRS element should be combined or deleted.

5.0 Activity Drivers

Activity drivers link the second and third parts of the ABC Model and are the mechanism for attributing the activity costs from the activity module to products in the cost object module. Figure 5.0.i illustrates the area of the ABC Model that is being described in this section.

Figure 5.0.i Activity Drivers



The purpose of the activity driver is to attribute the costs associated with activities to products. The methodology is chosen based on the following criteria;

- Is the activity an attributable or overhead activity (as described in Section 4.2)?
- If the activity is attributable, is the overall level of resources consumed by the activity dependent upon the number of items passing through that activity, i.e. is it volume of traffic items related?

Any class costing adjustments to activity drivers required are discussed in Section 7.0.

There are two types of traffic measure that can be used to attribute activity costs to products:

- **Reported Operational Traffic (ROT):** account based traffic is sourced from accounts receivable information and stamp and meter volumes are sourced operationally from a combination of machine counts and the average number of items in a container; and
- **Revenue Derived Traffic (RDT):** account based traffic is again sourced from accounts receivable information while stamp and meter volumes are sourced from revenue received divided by average unit prices (both of which are identified through business sampling).

Reported Operational Traffic is used to produce the regulatory financial statements.

The following sections describe the two different types of activity drivers used in the ABC Model: the operational and the non-operational drivers, and how the most appropriate activity drivers are identified for each activity. This section then describes the mechanism by which the activity drivers are applied, and how weighting factors are used.

5.1 Operational Activity Drivers

Operational activity drivers are based on traffic volumes and weighting factors. The drivers can either be calculated directly or via a multiple stage process.

This process will involve both the routing matrix and the outputs from the Mails Characteristics Survey, both of which are described below.

5.1.1 Routing Matrix Drivers

Volume related drivers are derived from the number of mail items posted by customers. These volumes, referred to as traffic, are used to attribute activity costs to products through what is termed the routing matrix.

The Routing Matrix

The routing matrix is a two dimensional view of the journey mail takes through the operational processes and activities, including collection, processing and delivery (as discussed in Section 4.1). The two dimensions of this matrix are the routes and the activities. The routes reflect how the operations handle and process mail volumes, and there are a number of routes that are dependent on the specific characteristics of the mail. This in turn influences which activities are used to sort and process the mail.

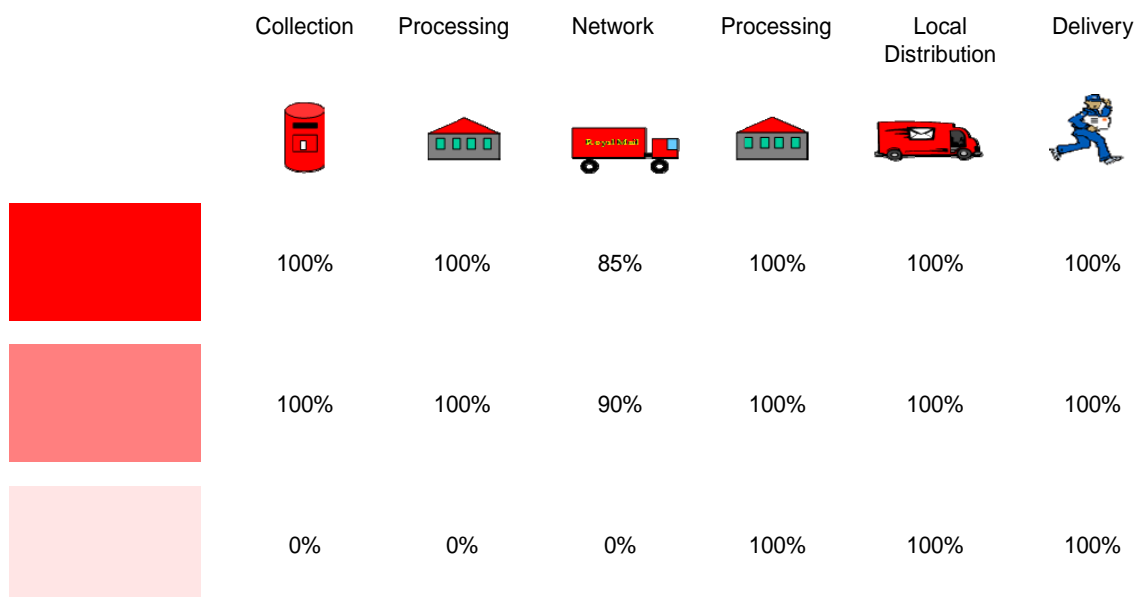
There are four characteristics of mail:

- **Class:** e.g. first class;
- **Payment method:** e.g. stamp;
- **Format:** e.g. letter, large letter or packet; and
- **Handling:** e.g. manual or machined.

The routing matrix operates at the Sales Product Handling Characteristic Combination (SPHCC) level, therefore reflecting the operational characteristics detailed above.

An illustration of how the routing matrix works can be seen in Figure 5.1.1.i where the percentage represents the proportion of the SPHCC that goes through the operational processes.

Figure 5.1.1.i Routing Matrix Illustration



In most instances, all of the mail volume on the route goes through the activity, but there are instances where the share is less than 100%. For example, some mail that is posted is for delivery within the same area. As such this mail does not rely on the Network, so the share of mail going on Network is less than 100%.

Mails Characteristic Survey

In order to identify the characteristics of mail items, Letters makes use of the Mails Characteristic Survey (MCS). This is a survey which provides the business with a range of information about the characteristics of mail. The survey objective is to gather observations about the range of products Letters delivers in the UK. Data is collected from all Mail Centres and RDCs.

Every Mail Centre and RDC has one or more dedicated sampling staff that carry out the sampling in line with a daily sampling schedule. The sampling procedures are consistent across all sites, and as such, a statistically valid sample is obtained. Once items have been selected for the sample, the required observations are recorded locally and transferred electronically to the Traffic Volumes and Characteristics team.

Mail volumes posted by customers have different combinations of these characteristics listed above, and therefore need to go through different routes within the operational processes. For example, non business customers tend to post items with stamps while business customers typically use a prepaid or meter machine impression as the payment method. Mail volumes with stamps need to have the stamps cancelled, but the mail with meter impressions do not.

Mail volumes are grouped according to the defined routes, and these mail volumes are then handled the same way. This represents the flow of mail through the operational pipeline.

Application of the Routing Matrix

In terms of how the routing matrix is applied, the first step involves assessing whether the activity is relevant to the route. If it is not then there is no routing share, while a routing share is required if the activity is indeed relevant to the route.

The routing matrix also contains information on the share of mail volumes that go through an activity on that route. The pipeline segment in which the activity sits is identified and the relevant Head of Design confirms that the share of volume is appropriate to each route, and identifies the factors that may change this share. Appropriate calculations are carried out based on various criteria, such as volumes and number of times the item is handled etc to reflect any relative difference.

Costs are attributed to SPHCC based on the share obtained from the routing matrix which reflects the relative difference in the volumes of SPHCCs being handled via specific activities.

These routing proportions are updated annually, if not more frequently following a review by the operational Heads of Design to reflect any operational change in the business. Updates can also take place on an ad-hoc basis to reflect any material changes to operations within the year.

The ABC Model holds a list of SPHCCs with associated proportion and weighting factors by activity.

5.1.1.1 SPHCC Weightings

Weighting factors (WFs) are used within the ABC Model as a means of attributing activity costs between the different products that use the activity. They are designed to reflect the relative amount of resource used by each product. WFs are required for each activity and SPHCC combination although in many cases the same basic rules apply.

Royal Mail holds a Databank of Standard Times, (known in Letters as Planning Values or PVs), that expresses the expected time to undertake a wide variety of tasks within operational processes. PVs are obtained from standard Industrial Engineering work measurement exercises undertaken over a number of years. A task is observed, the specific actions involved in the task are recorded, and the relevant time standards are applied to arrive at the time it should take to undertake the activity at a given rate of working.

WFs can be derived from PVs, which indicate the time typically taken to complete the various work tasks associated with an activity. PVs are prescribed for letters, large letters and packets and have been extrapolated to achieve the next level of detail (for different weights) based on the assumed cubic capacity of the average item within each weight category for different types of items (i.e. sub-formats).

Depending on the specific nature of the activity, WFs are designed on the rules as detailed in Table 5.1.1.1.i.

Table 5.1.1.1.i Weighting Factor Rules

Rule	Basis	Description
1	Composite WFs without routing matrix adjustment	Activities are split into sub-activities. Time-based WFs are created for each sub-activity using PVs and then combined to create a single set of WFs for the activity.
2	Composite WFs with routing matrix adjustment	Activities are split into sub-activities. Time-based WFs are created for each sub-activity using PVs and then combined to create a single set of WFs for the activity. Composite factors are calculated by adjusting the WFs to reflect the different proportions relevant to the weight of the SPHCC.
3	WFs are directly related to average size of the item	WFs for these activities are directly related to the average size of the item. Average sizes are sourced using MCS data (as described in Section 5.1.1).
4	WFs are directly related to average weight of the item	WFs for these activities are directly related to the average weight of the item. Average weights are estimated from MCS data (as described in Section 5.1.1).
5	Weighting Factor = 1	All WFs for these activities are set to 1 where the items are processed the same way regardless of exact size or weight. As such there is no requirement to have individual WFs. These WFs can also apply to activities that apply to a single SPHCC.
6	PVs	WFs for these activities are directly linked to industrial engineering PVs.

This section details the assessment criteria and information used to calculate the SPHCC weightings. A WF is calculated for each SPHCC for each activity. The basis on which the SPHCC weightings are chosen is undertaken at process level, and if appropriate, refined for individual activities within the process.

The assumed cubic capacities for sub-formats are calculated through regression analysis of the MCS data. For example, for Outward and Inward MC activities in Section 5.1.1.4 each comprise three parts:

- Transporting the work to the appropriate work area;
- Sorting; and
- Clearing and despatching the work.

Planning times are calculated separately for each of these three parts and then summed to give a single PV for the activity.

For example, in the outward primary sort activity, Table 5.1.1.1.ii below illustrates the industrial engineering analysis that would be prepared.

Table 5.1.1.1.ii Illustration of Industrial Engineering Analysis

Task	Planning Times for component tasks (Standard Minute Values SMV), by sub-format		
	Letter	Large Letter 0–100g	Large Letter 101–250g
1) Transport to work area	1	2	3
2) Undertake the sorting	24	28	30
3) Clear, containerise and transfer to next work area	2	10	20
Total Planning Time (TPT)	27	40	53
Weighting Factor (TPT/Letter TPT)	1	1.48	1.96

5.1.1.2 Weighted Traffic Volumes

Weighted traffic volumes are used to attribute the appropriate share of an activity's cost to products.

Many of the activities are common to a range of products, for example Outdoor Delivery involves the delivery of inland addressed products. The ABC Model recognises that mail with different characteristics consumes different levels of resource within the same activity. The way in which these differences are captured is through the application of WFs.

A WF is calculated for each SPHCC for each activity and reflects the following characteristics:

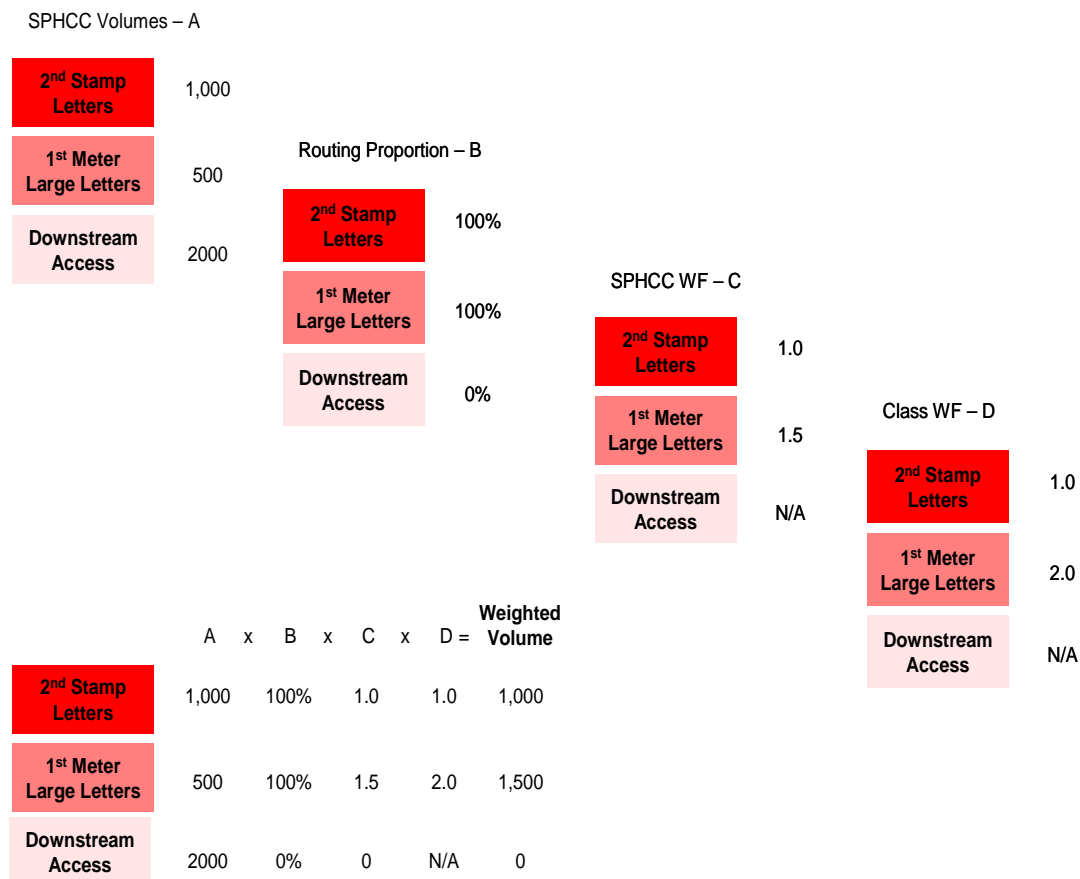
- **Workload:** effort required to process types of mail items for each SPHCC; and/or
- **Size:** cubic size and weight of the item.

The activity driver is calculated by multiplying the

- A.** Volume of individual SPHCCs by
- B.** The proportion of SPHCC passing through that activity by
- C.** The weighting factor for that SPHCC and activity by
- D.** The class weighting factor of the SPHCC – for example first class.

Figure 5.1.1.2.i illustrates how the driver quantities of weighted traffic volumes are created for a single activity.

Figure 5.1.1.2.i Weighted Traffic Volume Illustration



5.1.1.3 Derivation of Collection SPHCC Weightings

Collection routes are operated out of either Mail Centres or Delivery Offices. These are assumed to be sufficiently similar, and substitutable, such that the same principle in determining WFs is used for both.

Collection activities themselves comprise a number of separate sub-activities and these determine if the task is impacted by either the size and/or the number of items processed. This is used to create a composite size or number of items processed WF based on rule 1 in Table 5.1.1.1.i. This is shown in Table 5.1.1.3.i.

Table 5.1.1.3.i Collection Sub-Activities

Rule	Basis	Description
1	Vehicle preparation	Not affected by size or number of items collected.
2	Travel to start of route	Not affected by size or number of items collected.
3	Collecting from collection points of various types	Related to size of items collected. This is because it will take longer to collect larger items – for example collecting the same number of packets as letters will require more time.
4	Travel between collection points	Not affected by size or number of items collected.
5	Travel from end of route to hub/Mail Centre	Not affected by size or number of items collected.
6	Unloading, consolidation work on loading bay	Related to size of items collected. The larger the items the more time it will take to carry this out for a given number of items.
7	Reloading Yorks at hub	Related to size of items collected. The larger the items the more time it will take to carry this out for a given number of items.
8	Travel from hub to Mail Centre	Related to size of items collected. As this is essentially a bulk transport activity it is assumed that its cost will be affected by the size of items.
9	Unloading from consolidation vehicle at Mail Centre	Related to size of items collected. The larger the items the more time it will take to carry this out for a given number of items.

Note that the last three sub-activities above (items 7, 8 and 9) only apply to mail that is consolidated at a hub.

The outcome of the analysis demonstrates that there should be two bases for determining the weights;

- A weighting factor of one (rule 5 in Table 5.1.1.1.i) for vehicle preparation, travel to the start of the route, and travel from the end of the route to the hub or Mail Centre (items 1, 2, 4 and 5); and
- 'Relative size' of items (rule 3 in Table 5.1.1.1.i) for the other sub-activities (items 3, 6, 7, 8 and 9).

5.1.1.4 Derivation of Outward and Inward Mail Centre SPHCC Weightings

Outward and Inward Mail Centre activities relate to the mechanised or manual processing of mail for onward despatch towards final delivery.

For the Outward and Inward Mail Centre activities, the weighting factors are determined as follows:

- **Manual packet sortation:** the WFs are based on the PVs for the different sortation activities. This takes into account the transportation to the work area, sortation and transfer to the next work area as detailed above. (See rule 6 in Table 5.1.1.1.i);
- **Manual and machined letter sortation:** the WFs are one for all SPHCCs as there is only one letter format. (See rule 5 in Table 5.1.1.1.i);
- **Machined large letter sortation:** the WFs are one for all SPHCCs as the letter formats are processed the same way regardless of the weight of the item. (See rule 5 in Table 5.1.1.1.i);
- **Support activities:** includes Revenue Protection and Address Interpretation. The WFs are one for all SPHCCs as all formats are processed the same way regardless of the size or weight of the items. (See rule 5 in Table 5.1.1.1.i); and
- **Mail movement:** includes Platform Work, where the WFs differ depending on the average size of the items. (See rule 3 in Table 5.1.1.1.i).

In most cases the activity drivers have a WF of one due to the recording of operational activities by format.

5.1.1.5 Derivation of Outward and Inward RDC SPHCC Weightings

The RDCs provide the equivalent operation of a Mail Centre for the pre-sorted range of products and are strategically placed across the country. Products are collected from customer premises, having already been pre-sorted and containerised in accordance with product specifications. At a minimum, containers are sorted to an inward Mail Centre and to individual delivery walk as a maximum.

For outward and inward RDC activities, the WFs are determined as follows;

- **Mail movement:** which includes the movement of containers (e.g. bags) for onward despatch. The attribution of cost to product is directly related to the average size of the item (See rule 3 in Table 5.1.1.1.i); and
- **Support activities:** which includes mail verification. The WFs are one for all SPHCCs as all formats are processed the same way regardless of the size or weight of the items. (See rule 5 in Table 5.1.1.1.i).

In all cases the activity costs are based upon a WF relating to the average size of the item, which in turn impacts on the number of containers processed.

5.1.1.6 Derivation of Delivery Indoor SPHCC Weightings

Delivery Indoor activities relate to the costs associated with the sortation and preparation of mail for final delivery or in handling customer enquiries resulting from undelivered mail within the caller's office.

The attribution of costs to product falls into the following categories:

- **Sortation and preparation:** the WFs are based on the PVs for the different activities, taking into account the transportation to the work area, sortation and transfer to the next work area (see rule 6 in Table 5.1.1.1.i);
- **Callers office:** which involves dealing with customer enquiries where the WFs are based on PVs, taking into account the movement to/from the counter to the storage area, sortation of items transferred to the caller's office and dealing with customer enquiries (see rule 6 in Table 5.1.1.1.i);
- **Walk sequencing of machined letters:** the WFs are one for all SPHCCs as there is only one letter format. (See rule 5 in Table 5.1.1.1.i); and
- **Special Delivery locker work:** the WFs are one for all SPHCCs as all formats are processed the same way regardless of the size or weight of the items (see rule 5 in Table 5.1.1.1.i).

Activity drivers are either a weighting factor of 1, where items are processed the same way regardless of weight or size, or with reference to industrial engineering PVs.

5.1.1.7 Derivation of Delivery Outdoor SPHCC Weightings

Outdoor delivery activities typically consume resources from a number of cost types but the majority of these are OPG pay (and related payments) and vehicle costs.

There are six main types of outdoor delivery routes, which reflect the nature of the work undertaken on each route. Figure 5.1.1.7.i illustrates the share of products by format delivered by each route.

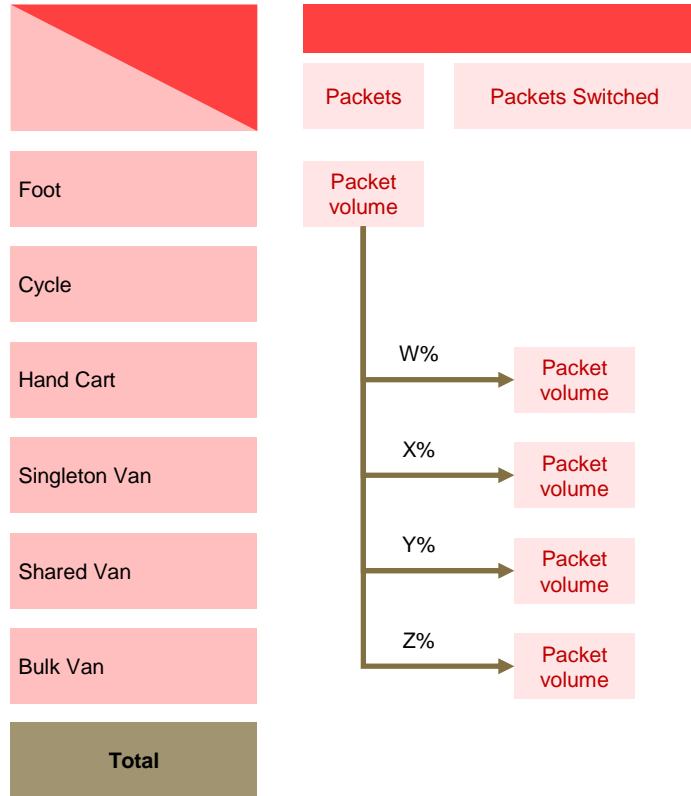
Figure 5.1.1.7.i Illustration of Delivery Proportions by Delivery Route

Delivery Methods	Town			Rural		
	Letters	Large Letters	Packets	Letters	Large Letters	Packets
Foot	40%	38%	35%	1%	1%	1%
Cycle	18%	18%	15%	2%	2%	2%
Hand Cart	2%	2%	10%			
Singleton Van	15%	15%	4%	12%	12%	15%
Shared Van	5%	5%	3%			
Bulk Van	5%	7%	15%			
Total	85%	85%	82%	15%	15%	18%

Unmotorised deliveries cannot deliver all of the packets destined for the delivery points on their routes, due to restricted space and weight capacity on the foot, cycle and trolley delivery methods. This can also apply to time dependant products such as Special Delivery products to fulfil the product specification. Oversized packets and time dependant products are delivered on vehicle routes.

An assessment of the volume and distribution of packets that are transferred from unmotorised deliveries to motorised deliveries is prepared. Typically, it is assumed that the largest size items will be the most likely to be transferred and the share that is transferred is lower for smaller size items (see Figure 5.1.1.7.ii.)

Figure 5.1.1.7.ii Unmotorised to Motorised Switching Illustration



Motorised deliveries also transfer some of the unmotorised mail for delivery to the start of their delivery routes and drop off additional pouches of mail to predetermined locations along unmotorised routes.

Outdoor delivery activities themselves comprise a number of separate sub-activities and these determine if the task is impacted by either the size and/or the number of items processed and is used to create a composite WF based on rule 2 in Table 5.1.1.1.i as shown in Table 5.1.1.7.iii.

Table 5.1.1.7.iii Delivery Outdoor Sub-Activities

Item	Input	Analysis
1	Volume for delivery to addresses on each route by format code	Impacted by volume by delivery route.
2	Volume transferred from unmotorised routes by format code	Packet switching analysis for each delivery route (does not apply to the unmotorised delivery activity).
3	Time per non-attendance call	Based on delivery planning analysis for each delivery route.
4	Number of items per call by type of delivery	Impacted by volume by delivery route.
5	Total time on this activity (SHRS hours)	SHRS hours for each activity.
6	Total volume through this activity	From ABC Model base data.
7	Acceleration time	Based on delivery planning analysis for each delivery route (does not apply to the unmotorised delivery activity).

This shows that the final composite WF is derived from a combination of PVs created for each sub-activity, the ‘relative size’ of the items being delivered on each delivery route and for the items that are transferred between unmotorised and motorised delivery.

5.1.1.8 Derivation of International Operations SPHCC Weightings

The International function is responsible for the processing of both export and import mail at its processing centres and for arranging the transport of all export mail to and delivery by, overseas administrations.

The attribution of costs to product falls into the following categories:

- **Manual packet sortation:** the WFs are based on the PVs for different sortation activities, taking into account the transportation to the work area, undertaking the sortation and transfer to the next work area as detailed above. (See rule 6 in Table 5.1.1.1.i.);
- **Manual and machined letter sortation:** the WFs are one for all SPHCCs as there is only one letter format. (See rule 5 in Table 5.1.1.1.i.);
- **Machined large letter sortation:** the WFs are one for all SPHCCs as the letter formats are processed the same way regardless of the weight of the item. (See rule 5 in Table 5.1.1.1.i.);
- **Support activities:** includes Revenue Protection and Customs. The WFs are one for all SPHCCs as all formats are processed the same way regardless of the size or weight of the items. (See rule 5 in Table 5.1.1.1.i.); and
- **Mail movement:** includes Platform Work. The WFs differ depending on the average size of the items. (See rule 3 in Table 5.1.1.1.i.)

Activity drivers are based upon either a weighting factor of one (where items are processed the same way regardless of weight or size, by reference to the average size where this is a factor) or with reference to industrial engineering PVs.

5.1.1.9 Network

Network activity costs relate to distribution of mail volumes around the country between different processing centres. National distribution is achieved using a mixture of resources, namely road, rail, air and sea transport. The attribution of network costs to products is based on the actual distribution services performed for each of the different products.

The methodology used to attribute activity costs to products incorporates;

- The use of routing matrix and associated weighted drivers – in this instance the WFs differ depending both on the average size of the items and the item related component. (See rule 3 in Table 5.1.1.1.i.);
- A two-stage process, which firstly identifies the proportion of cost for an activity relevant to groupings of products. Then secondly, this product grouping cost involves attributing the grouped product costs to products within that group using weighted volumes. The weighting is a reflection of both the items average size and the item related component. (See rule 3 in Table 5.1.1.1.i.); or
- Operational direct one to one drivers (as described in Section 5.1.2).

In most cases the size and the item related components are the drivers of the activity costs.

5.1.1.10 Local Distribution

Local Distribution activity costs relate to the cost associated with the distribution of mail from inward Mail Centres to the Delivery Offices within the Mail Centre's catchment area.

WFs are based on the average size of the item (rule 3 in Table 5.1.1.1.i) and are calculated using MCS data using the method described in Section 5.1.1.

5.1.2 Operational Direct One to One Mapping

A number of activities are directly related to a SPHCC. As such the activities are mapped directly to a single SPHCC as the activity costs have been incurred in the handling or support of that individual SPHCC. In these instances WFs are not required nor are the activities included in the routing matrix.

The ABC Model identifies those operational activities that have a direct relationship to a single SPHCC.

5.2 Non-Operational Activity Drivers

In the case of activities where the level of resources consumed by the activity are not dependant upon the number of items passing through that activity, the driver value is not based on mail volumes.

Drivers are calculated based on non mail volume data and are used to attribute activity costs to products. A direct driver can work on two levels, namely;

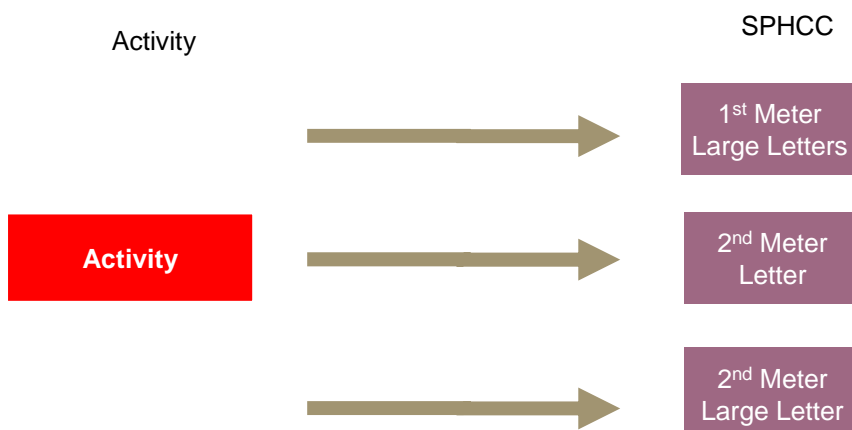
- A single activity mapped to a single SPHCC (See Figure 5.2i); or

Figure 5.2i Activity mapped to single SPHCC



- A single activity mapped to many SPHCCs (See Figure 5.2ii).

Figure 5.2ii Activity mapped to many SPHCCs



This section describes the key methodologies associated with the latter level.

5.2.1 Non-Operational Direct One to One Mapping

As with operational direct one to one mappings, there are a number of activities that are mapped directly to a single SPHCC as the activity costs have been incurred in support of an individual product.

5.2.2 Post Office Limited (POL)

The interbusiness charge from POL covers the provision of counter services and mailwork. Counter services include the selling of products and collecting of revenues. Mailwork includes acceptance of mail volumes and the provision of accommodation facilities to enable local delivery activities to be performed. The share of activity cost to SPHCC is defined by the POL management report which is supplied periodically to Letters. Activity costs are attributed to product based on either the volume or the revenue of that product.

5.2.3 Customer Management

The Customer Management team provide support to our customers via call centres and postal enquiries. Typically, enquires from our customers relate to product pricing, service failures and lost or damaged items of mail. The cost of Customer Management is attributed to products based on a profile of activities supplied by the Customer Management team.

5.2.4 Stamps and Collectables

The Stamps and Collectables main function is providing philatelic services to stamp collectors. In addition, they also fulfil the provision of stamps to large customers including retailers. Costs are attributed to product based on management information supplied by the Stamps and Collectables team.

5.2.5 Commercial

The Commercial team provides sales, pricing and marketing support for Letters. The costs of commercial activities are attributed to products based on a profile of activities supplied by the Commercial team.

5.2.6 Financial Services

Financial Services costs are those associated with the costs of accounts receivable for Letters. The cost of Financial Services activities are attributed to products based on a profile of activities supplied by the Financial Services team.

5.2.7 Manage Services

The Manage Services area relates to the marketing and sales activities associated with the products offered to the market. There are a number of activities to reflect the different products that are managed in this way e.g. stamp, meter, fulfilment, and media. The activity costs are then attributed to the products being managed based on a profile using either the volume or revenue for each product.

5.2.8 Compensation

The costs of compensation are those associated with making payments to customers for quality of service failures of products provided including delay, damage and loss. The compensation incurred is attributed to products based on the actual compensation paid out for each product. Compensation is reported within the GL against specific cost centres and GL codes and allows for the separate reporting of International and Domestic product compensation costs. The costs are then attributed to product on the profile of compensation costs reported by product by the team managing the process.

5.2.9 Services

Many Letters services make use of operational activities. However, typically, services do not relate to items of mail, i.e. are not traffic item related.

As described in Section 3.1.7, service specific activity costs are created by the creation of resource drivers built from industrial engineering PVs. These activities are then allocated to the relevant services either directly on a one to one basis where there is no further breakdown of that service, or split, based upon a defined set of rules. For example, Redirections will be split to the different lengths of Redirection contract offered on the basis of number of contracts.

5.3 Allocation of Overhead Activity Costs

The ABC Model initially attributes activity costs to products where a direct causal relationship can be observed. For those activities where this relationship is not observed, the allocation of activity costs to products is based on the proportion of previously attributed costs. This is consistent with the Third Postal Directive⁶ preferred methodology.

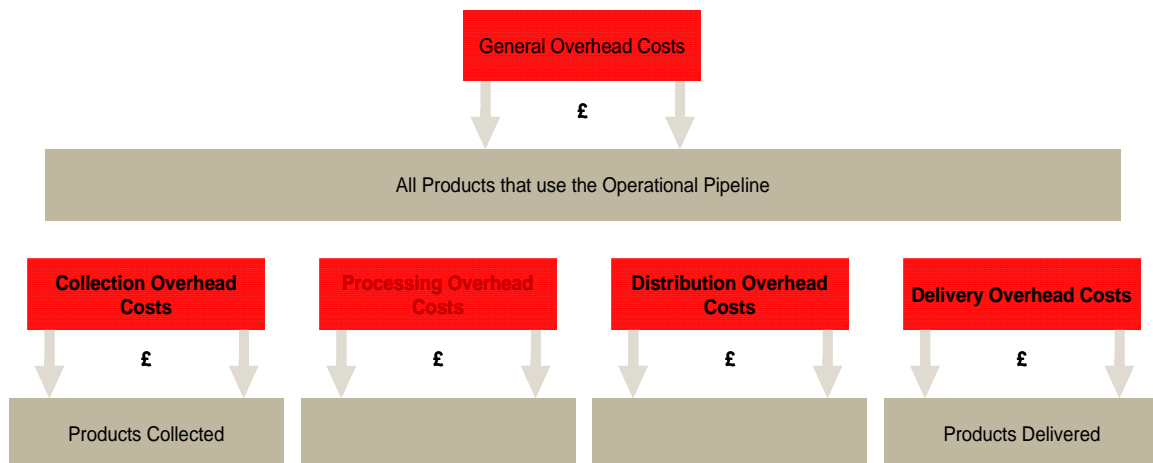
There are two overhead allocation methods;

1. Allocation based on operational pipeline. This can also be broken down to sub-pipeline. For example, where different units operate in the same pipeline such as Network and Collections, which collect different types of mail; and
2. Allocation based on groups of products. This could be all products for general overheads, subsets of products or SPHCC relevant to the type of overhead being allocated.

5.3.1 Allocation Based on Pipeline

Overhead activities occur across a number of business processes. Royal Mail uses a non nested approach to allocate overheads. Non nesting is a method whereby all overheads are allocated based upon only the calculated attributable cost base. Each overhead activity has been reviewed individually to identify the group of products that have indirectly benefited from that activity. This has generated the overhead attributions that are illustrated in Figure 5.3.1.i below.

Figure 5.3.1.i Overhead Allocation



⁶ Document available from www.psc.gov.uk.

Table 5.3.1.ii details the rules specifically in place for the allocation of overhead costs to products.

Table 5.3.1.ii Pipeline Overhead Allocation Rules

Overhead Area
Overhead costs at the International processing centre applied to SPHCCs processed there.
Overhead costs at RDC's applied to SPHCCs processed at RDC's
Overhead costs at Collections and Local Distribution applied to SPHCCs processed at Collections and Local Distribution
Overhead costs in Collections applicable to Network vehicles applied to SPHCCs collected using Network vehicles.
Overhead costs in Collections applicable to RM operations vehicle applied to SPHCCs collected using RM operations vehicles.
Overhead costs in Indoor Delivery applied to SPHCCs processed in Indoor Delivery
Overhead costs in Delivery (Indoor and Outdoor) applied to SPHCCs processed in Delivery (Indoor and Outdoor)
Overhead costs in Outdoor Delivery applied to SPHCCs delivered.
Overhead costs in Delivery using Network vehicles applied to SPHCCs delivered by Network vehicles
Overhead costs in Inward processing applied to SPHCCs processed at an Inward Mail Centre
Overhead costs in support 1c and Import SPHCCs requiring Inward processing applied to 1c and Import SPHCCs processed at an Inward Mail Centre
Overhead costs in Local Distribution applied to SPHCCs using local distribution.
Overhead costs in Network using Network vehicles applied to SPHCCs conveyed by Network vehicles
Overhead costs in Network using vehicles applied to SPHCCs conveyed by RM Operations vehicles
Overhead costs in Outward processing applied to SPHCCs processed at an Outward Mail Centre
Overhead costs in support 1c and Import SPHCCs requiring Outward processing applied to 1c and Import SPHCCs processed at an Outward Mail Centre
Commercial overhead costs applied to all SPHCCs excluding Wholesale, first and second class stamp commission and overseas delivery costs

5.3.2 Allocation Based on Groups of Products

Figure 5.3.2.i illustrates how the non-nested overhead cost allocation based on groups of products method works.

Figure 5.3.2.i Illustration of Overhead Allocation



A number of rules fall into this category of overhead allocation as shown in Table 5.3.2.ii

Table 5.3.2.ii Product Overhead Allocation Rules

Overhead Area
Wholesale overhead costs applied to Wholesale SPHCCs
General overhead costs applied to all SPHCCs
Overhead costs in support of account based products excluding Wholesale products applied to all account based SPHCCs excluding Wholesale products
Overhead costs in support of account based products excluding Wholesale, Door to Door and Response Services applied to all account based SPHCCs account based products excluding Wholesale, Door to Door and Response Services
Incoming International overheads applied to Incoming international SPHCCs
Airmail, Surface Mail, Contract, International Priority and Incoming International overheads applied to Airmail, Surface Mail Contract, International Priority and Incoming International SPHCCs
Commercial overhead costs applied to all SPHCCs excluding Wholesale
Overhead costs in support of traffic related products applied to all traffic related SPHCCs
Overhead costs in support of stamp SPHCCs applied to all stamp SPHCCs

5.4 Maintenance of Activity Drivers

Activity drivers are either volume related or direct to product. The volume related drivers are based on the SPHCC traffic volumes for the period being processed. The maintenance of this type of driver is planned around the SPHCCs. When a new SPHCC is identified, decisions are required in relation to:

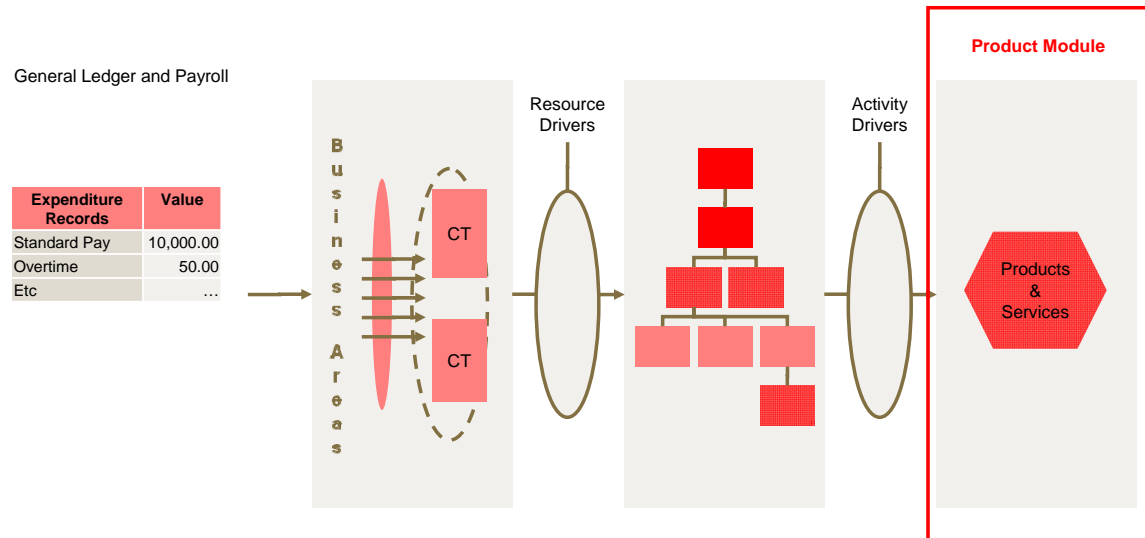
- Product group;
- Format group;
- Route to be allocated on routing matrix; and
- WFs to be allocated for activities that the SPHCC is routed through.

Maintenance of direct to product drivers can be done on a quarterly or annual basis. Of the direct to product drivers described above, only Stamps and Collectables is updated annually, with all other drivers updated quarterly. Because the purpose of an activity driver is to attribute activity costs to products, the maintenance routine is focused around changes in the SPHCCs, which link to the volume related driver maintenance above.

6.0 Product Module

The product module holds costs associated with Letters products (see Figure 6.0.i). These are populated with costs using the activity drivers detailed in Section 5 above. Costs are held at a level of detail defined by the SPHCC. The SPHCC is an important feature of the volume related drivers methodology. There are over one thousand SPHCCs mapping to approximately three hundred individual products.

Figure 6.0.i Product module



This section describes the structure of the products against which costs are reported and the type of costing information available from the ABC Model.

6.1 Product Module Structure

The ABC Model attributes costs at SPHCC level, which is the product level with the following associated handling characteristics:

- **Class:** including first class, second class and third class;
- **Payment method:** including stamp, meter and account;
- **Size:** including letter, large letter and packet; and
- **Route:** machined or manual.

The current tariff structure for many of the inland products provides a more detailed structure on the size characteristic and this is also reflected within the ABC Model. The detailed sizes of different products are shown in Table 6.1.i.

Table 6.1.i Size Tariff and Costing Options for Inland Products

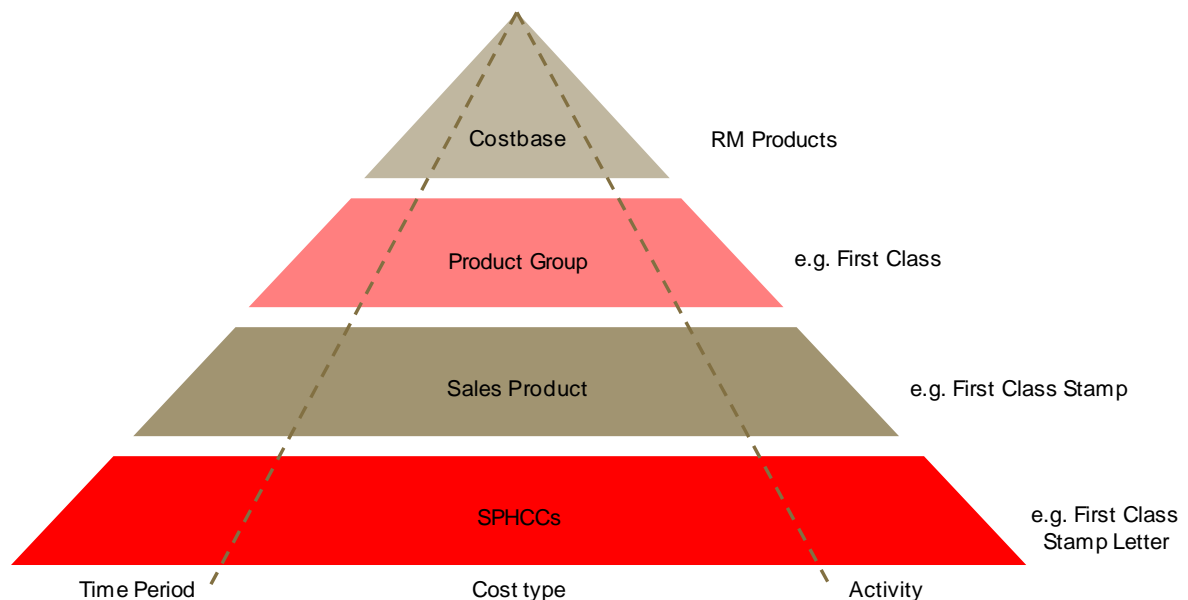
Weight band	Letter	Large letter	A3 packet	Packet
0–100g	✓	✓	✓	✓
101–250g		✓	✓	✓
251–500g		✓	✓	✓
501–750g		✓	✓	✓
751–1000g				✓
1001–2000g				✓
2001–5000g				✓
>5000g				✓

Further details can be accessed via <http://www.royalmail.com/>

SPHCC costs can be expressed as a total or on an average per unit basis, which is calculated by dividing the total by the SPHCC volume.

The Product module is hierarchical and an illustration of the hierarchy is shown below in Figure 6.1.ii.

Figure 6.1.ii Illustration Of Product Hierarchy



The ABC Model contains a table that links the sales product and sales product group.

A separate table holds SPHCC codes mapped to a sales product code.

6.2 Classification of Products

As part of the reporting mechanism, products are classified either by:

- **Group:** this level is used for Regulatory Reporting, e.g. mailsort, first class etc.;
or
- **Format:** e.g. letter, large letter or packet.

The classification is held as an attribute against each product in the ABC Model.

6.3 Products with no Cost

A small number of products exist within the ABC Model for which there is no attributed costs. The reasons are;

- **There are no reported volumes:** the costs and volumes for this product are reported against the main mailing product;
- **Licence fees:** revenues relate to a Licence Fee paid to allow customers use specific products;
- **Services:** revenues relate to fees charged for services provided to customers which are not volume related;
- **Volumes:** there are no volumes for these products in the reported quarter; or
- **Adjustments:** revenue relates to central adjustments added to the ABC Model for reconciliation purposes in producing the regulatory accounts made or at customer level rather than product level.

6.4 Universal Service Obligation (USO) Categorisation

Product costs are assigned to regulatory service groups, defined as part of the licence condition regarding Regulatory Reporting. The service groups are:

- USO (USO results are required to be reported across two weight bands, 0–350 grams and 351 grams and over);
- Price controlled; and
- Non-price controlled.

6.5 Maintenance of Product Module

The maintenance of products is achieved through the maintenance of activity drivers (see Section 5.0).

7.0 Class Costing

Letters processes, activities and resources reflect the products provided and their corresponding attributes e.g. format (letter, large letter, and packet) and class (first⁷, second or third). Product attributes have determined the design and resourcing requirements of many of the activities. For example, the first class product offer is a next day delivery service Monday to Saturday. To achieve this requirement Letters operational processes have the capability of joining up all collection and delivery points overnight. Working between the latest acceptance collection times and the time the mail needs to be available for delivery, the mail is distributed around the country overnight. This requires staff to work through the night, and in some cases using aircrafts to fly mail between the most southerly and northerly points of the UK.

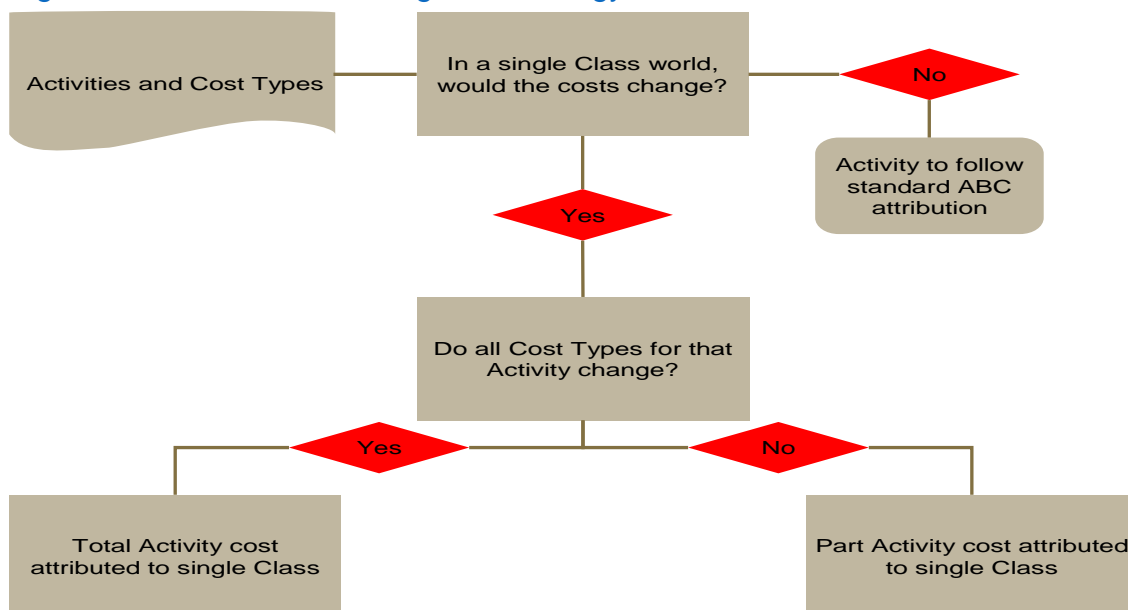
In the ABC Model, such a differentiation between class of the service and the impact that has on activities and resources consumed is not typically required. This means that activity costs are attributed to products based on consumption of the underlying activity rather than recognising the relative demands of the product service specification. Class costing methodology aligns the impact that the class of a service has on the activities and resources consumed in achieving that level of service in the ABC Model.

The methodology has two key stages:

- Determining if an activity or resource is pertinent to a single class of mail; and
- Creating class activities for one or more cost types.

The high level methodology is illustrated in Figure 7.0.i

Figure 7.0.i Class Costing Methodology



⁷ For the purpose of class costing both export and import International mail is treated as first class. This reflects the operational processes undertaken.

This section details the approach used to assess whether activities and cost types need to be class costed, and how class costing is deployed in the ABC Model.

7.1 Assessment Approach

The assessment approach is focused on both the activities undertaken and cost types used by the business as well as the quantity of activities and cost types used to meet the product service specifications.

In the assessment approach, the basic question is 'if Letters had only one class of mail, at current total volumes, would the costs change?' If the answer is 'no' then class costing is not required and hence the ABC cost attribution rules apply as detailed in sections 3.0 and 5.0. If the answer is 'yes' then it may be applicable for class costing the activity and/or cost types.

The assessment falls into 2 categories;

- Discrete costs that can be allocated directly to a class, for example shift payments; and
- An assessment of the extra level of resource required in support of processing a certain class of mail. Any scale or scope costs assessed are then allocated to that class of mail.

In the case where class costing adjustments are required, it is necessary to consider whether all cost types for that activity change, or whether only some cost types will vary.

If in the situation where activities are based on the resources consumed by a single class of mail it is clearly appropriate to attribute that cost in total to the relevant class.

In the situation where only specific costs within an activity change, then the activity cost is attributed to products in a way that is specific for the cost type. This involves estimates of the economies of scope that arise from having two or more classes of mail. Given that Letters processes handle different classes of mail using the same activities, (for example the sortation of mail via machines covers both first and second class items) these economies can then be assigned to a particular class of mail (in the above example first class mail is processed during a short processing window in order to achieve next day delivery, leading to a requirement for more machines, and is processed during the evening, leading to the incursion of shift payments, therefore non running time machine costs and shift payments are assigned to first class items).

Because the mail centre network infrastructure is mainly designed and resourced to provide a next day (first class) service, then this operation is described as first class led which means the economies of scope are assigned to second and third class products.

To assess the economies of scope the quantity of resources required by the existence of first class products is assessed, for example, as follows;

- The requirement to have more machines to operate over a short processing window leads to the creation of non running time for those machines. Class costing assumes that the first class products are driving the machine requirement to meet a peak workload.

Within the ABC Model the non running time of each machine type is recorded separately and costed. This cost is allocated to the first class products that use the particular machine. This can involve more than one activity if a machine is used for both Outward and Inward activities and it is the first class product volumes that are used as the basis of allocation.

Accommodation costs associated with machines are also class costed in this way;

- Shift payments are incurred in order to process first class mail to ensure that it meets its delivery specification. This cost is therefore allocated to first class products;
- Air freight costs are primarily incurred for the transport of time critical products and therefore costs are largely allocated to first class products

As illustrated above, the economies of scope can be shown by looking at shared machines, and the allocation of accommodation costs associated with these machines to class.

The total volume of mail by format and class from the prior year is divided by the processing window to create a throughput by class of mail.

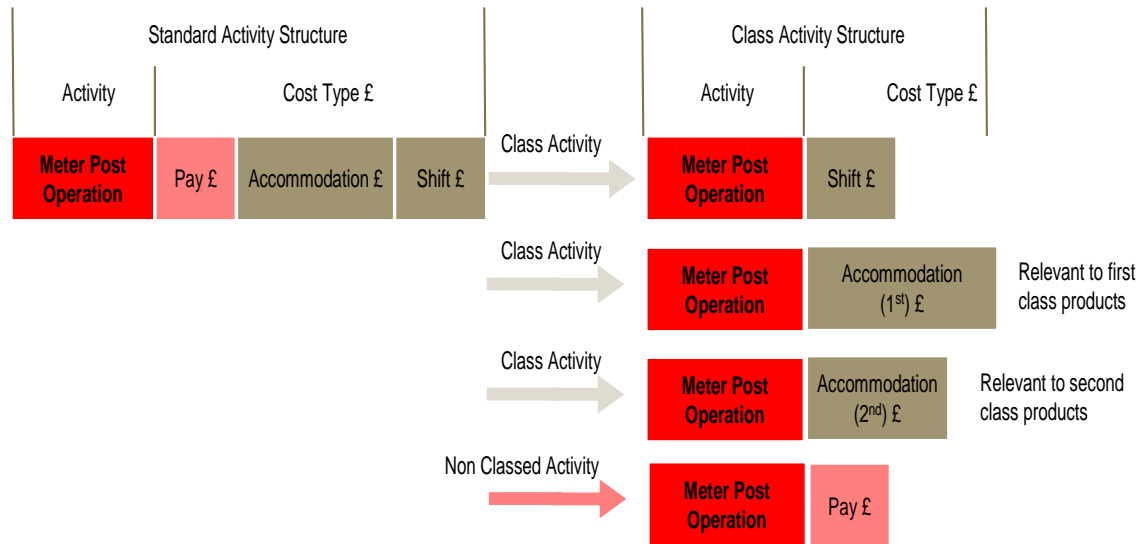
An average throughput for the total of all classes and formats of mail is calculated and the difference between the average throughput and the first class throughput is attributed to first class mail only, representing the overcapacity (the extra machines required to allow for a next day service) required to support first class in the available processing window to achieve first class specification.

7.2 Deployment in ABC Model

Activity costs are made up of a number of cost types and class costing methodology defines the attribution of cost types within activities to product.

This approach notionally recognises each appropriate cost type and activity combination as a separate class and non-class activity as illustrated in Figure 7.2.i

Figure 7.2.i Creating Class Activities



In the case of accommodation an assessment is made between that required for first class and that required for second based upon the amount of traffic and the time available for processing, leading to the creation of two classed activities for the cost type accommodation.

The approach does not apply directly to activity drivers (see Section 5.1.2).

7.2.1 Cost Types to Class Activities

For any cost type within an activity that is defined as being class costed, it is necessary to create a class activity and allocate the defined cost type to that class activity. Cost types that are class costed are detailed in Table 7.2.1.i. This rule is superseded in the case of direct drivers as described in 7.2.

Table 7.2.1.i Class Costed Cost Types by Business Process

Process/cost type/class	Accommodation	Machinery	Shift	Shift	Air freight
	First	First	First	Second	First
Collection					
Outward	X	X	X		
Inward	X	X	X		
International			X		
Delivery Indoor		X			
Network					X
Delivery Outdoor					
RDC			X	X	

For example, the meter post operation within the Outward Mail Centre is a class activity. The accommodation cost type has been identified as a class cost type. As such, class costing involves creating a new activity to which the single cost type for accommodation is attributed using the resource driver appropriate to that cost type. This new activity is then attributed to a class mail depending on the nature of the class activity.

A class activity uses the same type of resource driver as the non-class activity. As such the resource driver needs to be split between the non-class and class activities.

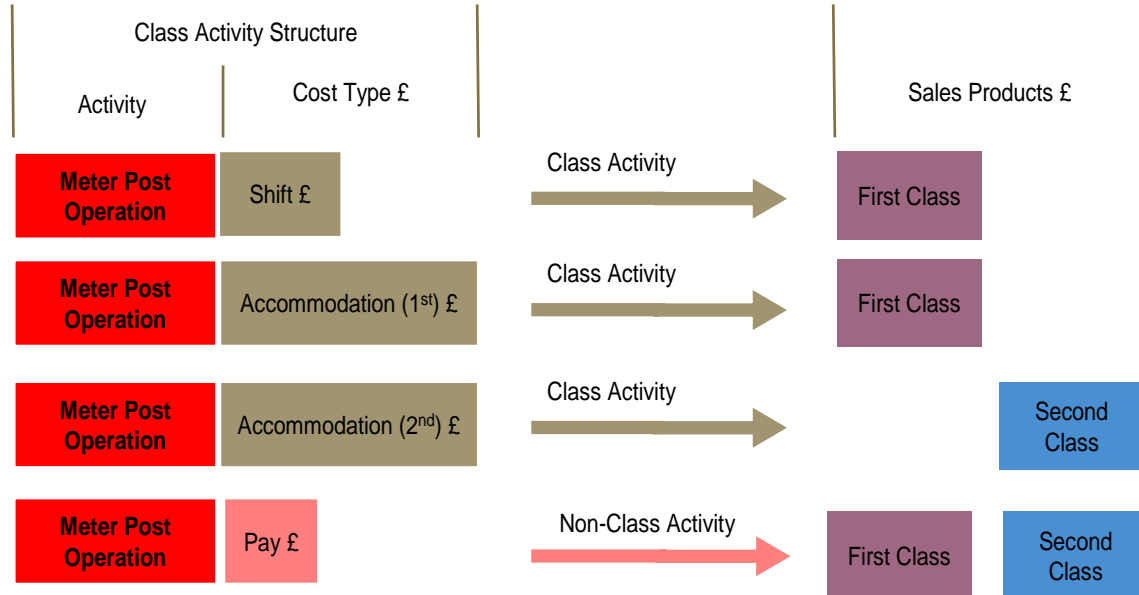
Building on the meter post operation example, this activity occupies part of the indoor floor space at the Mail Centre. The accommodation cost type uses the resource driver of accommodation square metres, and hence this is split between the classes of mail that are processed in the meter post operation.

This split then allows different proportions of the accommodation indoor costs to be attributed to the different classes of mail as illustrated in Figure 7.2.2.i.

7.2.2 Class Activity to Product

For the second step the class activity costs are attributed to SPHCCs using the traffic volumes (generated from the routing matrix) multiplied by the format WF multiplied by a class WF.

Figure 7.2.2.i Class Activity to Sales Products



Activity to SPHCC assignments are created from the routing matrix and activity driver quantities are generated when the traffic volumes are applied. The activity driver quantities are then multiplied by the WFs to give a revised driver product quantity in relation to the class of products that use the activity. This is illustrated in Figure 7.2.2.ii.

Figure 7.2.2.ii Activity to Products Assignment

Activity		Activity Type	Product	Product Volumes	Routing Matrix	Weighting Factor	Class Weighting Factor	Weighted Product Volumes
Meter Post Operation	Shift £	Class Activity	1st Meter Letters	1,000	100%	1.0	1.0	1,000
			1st Meter Large Letters	500	100%	3.0	1.0	1,500
Meter Post Operation	Accommodation (1 st) £	Class Activity	2nd Meter Letters	2,000	100%	1.0	0	2,000
			2nd Meter Large Letters	1,000	100%	3.0	0	3,000
Meter Post Operation	Accommodation (2 nd) £	Class Activity	1st Meter Letters	1,000	100%	1.0	0	1,000
			1st Meter Large Letters	500	100%	3.0	0	1,500
			2nd Meter Letters	2,000	100%	1.0	0	2,000
Meter Post Operation	Pay £	Non Classed Activity	2nd Meter Large Letters	1,000	100%	3.0	0	3,000

7.3 Class Costing – Third Class Approach

Class costing for third class focuses on different areas: RDC, Network, Collection and Delivery.

7.3.1 RDC

Where Mail Centres are regarded as being first class led, due to the need to process mail for delivery the next working day, RDC's are considered to be second class led, dealing with pre-sorted mail mainly for later than next working day delivery, though there is a small amount of first class pre-sorted mail entering the network via RDC's which is then transferred to the Mail Centre network.

RDC's are considered to be second class led, therefore, shift payments are attributed to first and second class products only, shift payments are incurred in order to process mail to ensure it meets its delivery specification, third class mail is not time critical. This is to reflect the fact that the operation has been set up as second class network, to be consistent with the class costing methodology applied in the mail centres. Class specific sortation activities are being utilised within the RDCs.

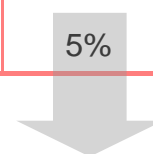
7.3.2 Collection

The product specification for mailsort third class is a five day collection carried out Monday to Friday compared to all other product specifications which have a six day collection.

An incremental approach has been applied with third class treated as the baseline with the increment being applied to first and second class. This is to reflect the additional Saturday collection costs for first and second class, as illustrated in Table 7.3.2.i.

Table 7.3.2.i Saturday Collection Assessment Illustration

Mail Volume Proportions by Day of the Week	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
First Class Mailsort	20%	20%	20%	20%	15%	5%
Second Class Mailsort	20%	20%	20%	15%	20%	5%
First Class Presstream	20%	15%	20%	30%	10%	5%
Second Class Presstream	20%	20%	20%	15%	20%	5%
Average Daily Profile	20%	20%	20%	20%	15%	5%



The proportion of mail collected on a Saturday is used as the basis of additional costs incurred by first and second class mail.

7.4 Maintenance of Class Costing

Through the maintenance of resource drivers the requirements of class costing is included. For example the calculation of non running time is refreshed via the static data refresh of machines.

In addition class resource drivers (as described in section 7.2) are updated yearly based on prior years data. These drivers reflect an assessment of the accommodation requirements for first class and that required for second based upon the amount of traffic and the time available for processing.

No maintenance is required for activity drivers as the class weighting factor as described in section 7.2.2, is binary which reflects whether SPHCC's are first or second class.

Appendix A Guiding Principles

The Guiding and Methodological Principles for product costing as shown in Appendix B of Annex 2 of the Cost Transparency and Accounting Separation Decision Document dated March 2011 is replicated below.

Part I – The Guiding Principles

If there is conflict between the requirements of any of the Guiding Principles, the Principles are to be applied in the order in which they appear below.

1. Compliance with the European Postal Services Directive

The Costing Methodology must comply with the European Postal Services Directive.

2. Completeness

The Costing Methodology must take into account all the relevant RML costs captured in Royal Mail's financial records including all the relevant costs recorded in Royal Mail Letters' General Ledger.

The Costing Methodology must cost all Sales Products.

3. Causality

The Costing Methodology must assign General Ledger costs to Activities that cause those costs to be incurred.

The Costing Methodology must assign Activity Costs to those Sales Products that are provided as a result of, or are supported by, those Activities.

4. Objectivity

Each element of the Costing Methodology must, as far as possible, be based on, or take account of all the available financial and operational data that is relevant to that element.

Where an element of the Costing Methodology is based on assumptions, those assumptions must be justified and supported, as far as possible, by all available relevant empirical data. The assumptions must not be formulated in a manner which unfairly benefits Royal Mail Letters or any other operator, or creates undue bias towards any Sales Product or Activity.

5. Accuracy

The Costing Methodology must maintain an adequate degree of accuracy throughout the costing process in both extracting and processing data.

An adequate degree of accuracy means the costing process is free from material errors, including any double-counting (see Principle 9 for the definition of materiality).

6. Compliance with the International Financial Reporting Standards (IFRS)

The Costing Methodology must comply with IFRS, to the extent that Royal Mail's statutory accounts comply with IFRS, with the exception of any departure from IFRS in the preparation of those statutory accounts which is expressly disclosed in the statutory accounts.

7. Consistency

The Methodological Principles must be consistent with the Guiding Principles.

The Costing Methodology (as documented in the Costing Manual) must be consistent with the Methodological Principles.

As far as possible, the Costing Methodology must be applied to all elements of costing consistently. All differences in application must be justified by reference to the Methodological Principles or Guiding Principles.

As far as possible, the Costing Methodology must be applied consistently over time. All changes from one period to another must be justified in accordance with the change control procedures, and by reference to the Methodological Principles or changes in them, or by reference to the Guiding Principles.

8. Transparency

The Methodological Principles must be published by Royal Mail. The detailed Costing Methodology must be clearly documented in Royal Mail's Costing Manual. The Costing Manual must contain the level of detail necessary to allow a user of the Costing Manual, with a reasonable degree of professional skill, to gain a clear understanding of a given calculation carried out through the application of the Costing Methodology without the need for further instruction or interpretation.

9. Materiality

The Guiding Principles 1 to 8 must be applied to all material costs, or material changes in costs.

A material cost, or a material change in a cost, is one which is reasonably expected to affect the views of a competent user of Royal Mail Letters' regulatory reports and costing results.

Appendix B Methodological Principles

1. Primary purpose

The primary purpose of the Costing Methodology is to calculate the total and unit costs of Royal Mail Letters' Activities, Products and Sub-products using all the relevant costs captured in Royal Mail's financial records including Royal Mail Letters' General Ledger.

2. Activity Based Costing (ABC)

The Costing Methodology must be Activity Based Costing. This principle states the broad requirements for the costing methodology while the requirements around specific aspects of the methodology are covered in more detail in subsequent principles:

- The Costing Methodology must identify (i) all the Activities that Royal Mail Letters performs as part of its Operational and Non-operational Business Processes, and (ii) all the Products and Sub-products which Royal Mail provides.
- The Costing Methodology must calculate Activity Costs, using appropriate Resource drivers, and ensure that the costs of the resources which each Activity consumes are attributed to that Activity.
- The Costing Methodology must assign Activity Costs, using appropriate Activity drivers, to all the Products and Sub-products which are provided as a result of, or are supported by, that particular Activity. The assignment of Activity Costs must be done in one of the following two ways.
 - Attributing, where a direct causal link between an Activity and the relevant Products and Sub-products can be identified and used as the basis for assigning costs; or
 - Allocating, where no direct causal link can be identified between an Activity and the relevant Products and Sub-products, and instead a reasonable assumption needs to be made to assign the Activity Costs to the relevant Products and Sub-products.

3. Operational reality

As far as practicable, the Costing Methodology must reflect the operations of Royal Mail as they are undertaken.

The exception to this Principle is Class costing (see Principle 4).

4. Class costing

First Class mail

Class costing must be applied to all avoidable First Class costs. Avoidable First Class costs are costs which meet the following criteria:

- The costs would be avoided, if Royal Mail were not to offer First Class Products, but the current operational specifications of all other Products were to remain unchanged, and
- The costs exclude any incremental costs which would be incurred, if all Second Class items using the First Class Activities were to be processed alongside other Second Class items.

Avoidable First Class Costs

All avoidable First Class costs must be attributed only to First Class Products. Avoidable First Class costs may include, but need not be limited to, the following Cost Types:

- Accommodation;
- Shift allowance; and
- Plant & machinery non-running time costs.

Second Class mail

Class costing must also be applied to all avoidable Second Class costs. Avoidable Second Class costs are costs which meet the following criteria:

- The costs would be avoided, if Royal Mail were not to offer First or Second Class Products, but the current operational specifications of Third Class products were to remain unchanged; and
- The costs exclude any incremental costs which would be incurred, if all Third Class items using the First or Second Class Activities were to be processed alongside other Third Class items.

Avoidable Second Class Cost

All Avoidable Second Class costs must be attributed only to Second Class Products. Avoidable Second Class costs may include, but need not be limited to, the following Cost Types:

- Accommodation,
- Shift allowance, and
- Plant & machinery non-running time costs.

5. General Ledger costs and Cost Types

The relevant categories of costs recorded in Royal Mail's financial records, including Royal Mail Letters' General Ledger cost accounts, may be aggregated into a set of Cost Types before attributing those costs to Activities.

Cost Types must be selected such that each represents the costs of a single key resource being utilised (e.g. staff, machines, accommodation, vehicles).

6. Activities

Where appropriate and where to the extent possible, Business processes must be divided into Activities.

7. Resource Drivers

All costs aggregated into Cost Types must be attributed to the Activities which cause those costs to be incurred. Where a Cost Type is incurred as a result of more than one Activity, Resource drivers must be used to attribute an appropriate share of the Cost Type to each Activity. The Resource driver for each Cost Type must be:

- Based on the resource consumption giving rise to the Cost Type (e.g. staff hours, machine hours, accommodation footprint, vehicle hours), and
- Quantified based on appropriate operational and financial data (including the prior year's costs).

8. Products and Sub-products

Where applicable, each Product, or a group of similar Products, must be divided into a range of Sub-products which identifies, and differentiates between, all the applicable and relevant measured characteristics which affect how processing an item of that Product, or group of Products, incurs costs. The measuring characteristics should, as a minimum include the following:

- Format (e.g. letter, large letter, packet, etc.) ;
- Class (e.g. first, second, third, etc.);
- Payment method (e.g. stamp, meter, account, etc.); and
- Handling (e.g. mechanised versus manual, etc.).

The Costing Methodology must cost the whole range of Sub-products. For the avoidance of doubt, the use of additional measuring characteristics is permitted.

9. Activity Costs

The Costing Methodology must assign an appropriate share of each Activity Cost to each of the relevant Sub-products as set out below.

To determine how an Activity cost is to be assigned to the relevant Sub-products, it must first be determined into which one of the following categories the Activity cost falls:

Attributable Costs

Costs of Activities within a single operational Business process which have a direct causal link to the processing of some or all of the Sub-products;

Overheads

- Pipeline Overheads: Costs of Activities related to one or more operational Business processes which do not have a direct causal link to any of the Sub-products being processed; and
- General Overheads: Costs of Activities related to non-operational Business processes (these overheads relate to the pipeline as a whole).

Non-operational Direct Costs

Costs of Activities which are directly related to certain Products, but are not part of the operational Business; and

Aggregate Costs

Activity costs, or a proportion of an Activity cost, which are assigned in aggregate to notional Sub-products and not incorporated into the unit costs of the commercial Sub-products, for the following reasons:

- The costs do not follow the handling characteristics which are used to define Sub-products (see Principle 8), or
- The costs relate to Activities carried out on behalf of other Royal Mail Group business units apart from Royal Mail Letters, and do not relate to any of Royal Mail Letters' Products. These costs must be included in the costing to ensure reconciliation of costs and data integrity.

10. Activity Drivers

The assignment of Activity costs to Sub-products must be done using appropriate Activity drivers which are identified and quantified based on the following rules:

- Each Activity cost must be assigned to all the Sub-products which that Activity directly contributes to, or indirectly supports; and
- Activity drivers must reflect the relative proportions of the workload which the totality of all the units of each Sub-product creates for the related Activity.

Three types of Activity drivers are to be used.

Weighted Volume Drivers (see Principle 11)

Weighted Sub-product traffic volumes represent the relative workload of processing all the units of each Sub-product taking into account the proportion of the total number of units which consume the relevant Activity;

EPMU (see Principle 12)

Equi-Proportional Mark-Up methods which allocate costs based on the relative proportions of the costs which have already been assigned to the relevant Sub-products; and

Other Drivers (see Principle 13)

These are used for costs which are directly linked to a factor other than mail traffic in the pipeline (e.g. certain Network costs which depend on vehicle runs).

The following table shows how each type of Activity cost is to be assigned to Sub-products:

	Attributable costs	Overheads (Pipeline and general)	Non-operational direct costs and aggregate costs
Weighted Volume Drivers	✓		
EPMU Drivers		✓	
Other Drivers	✓		✓

11. Weighted Volume Drivers

Weighted Volume Drivers must incorporate two types of factors for each relevant attributable Activity cost:

- Proportional Factors which represent the proportion of the total volume of each Sub-product which uses the related Activity; and
- Weighting Factors which represent the relative proportions of workload that units of each Sub-Product require from the related Activity

Proportional Factors must be based on operational data collected using representative measurements of total volumes (including statistical sampling techniques where necessary).

Depending on the nature of the Activity, one of the following variables may be used as a determinant of the workload to calculate the Weighting Factors:

- **Time** (needed to carry out the Activity): Where appropriate, industrial engineering studies must be carried out in accordance with relevant ISO standards;
- **Weight**: Appropriate operational data must be used; and
- **Size**: Appropriate operational data must be used.

Annual reviews must be conducted to ascertain which Proportional Factors and Weighting Factors need to be reviewed, and if necessary, updated to ensure that they continue to reflect the operational reality accurately.

To identify the Proportional Factors and Weighting Factors which may need adjusting, as a minimum, the changes during the year in the following areas must be considered:

- Working practices;
- Technology; and
- Sub-products mix (relative volumes).

Ad hoc event-driven reviews and updates may be carried out as and when necessary.

12. Equi-Proportional Mark-Up (EPMU)

EPMU must be used for allocating Overheads (Pipeline and General). Overheads must be allocated to all, and only, those Sub-products which they support:

- Pipeline Overheads must be allocated to all, and only, those Sub-products which are processed by that element of the pipeline; and
- General Overheads must be allocated to all Sub-products which are processed through the pipeline.

EPMU must be applied for each of the Activity costs within Overheads separately, and be based *only* on the proportions of *all* the Attributable Costs once they have been attributed. EPMU applications must not take account of any other costs already allocated using EPMU (non-nested approach).

13. Other Drivers

Other Drivers are used for costs (certain Attributable costs and all Non-operational direct costs and aggregate costs) which are directly linked to a factor other than mail traffic in the pipeline (e.g. certain Network costs which depend on vehicle runs).

Other Drivers must be defined in a way which appropriately reflects the causal link with that factor.

14. Traffic measurement

Royal Mail may use two methods of traffic measurement in its Costing Methodology:

- Operational measurement (e.g. using machine counts or sampling); and
- Revenue derived measurement whereby the Product traffic volume is calculated by dividing the total Product revenue by the average Product unit price.

The measurement method used for each Sub-product must be applied consistently within the Costing Methodology and over time.

Where the difference between the results obtained by the two measurement methods is material, Royal Mail must:

- reconcile, and explain the material differences between the two measurement methods; and
- demonstrate that where the unit cost of a Sub-product calculated using an operational traffic measurement is different to the unit cost calculated using a revenue-derived traffic measurement, that the difference is due solely to the difference in the two measurement methods.

15. Operational data and sampling

All operational data used by the Costing Methodology must be regularly reviewed and where necessary updated to ensure the accuracy of costing and its consistency with the operational reality (see Principle 3).

All sampling used by the Costing Methodology must be based on statistical techniques regarded as appropriate and applied by qualified professional statisticians.

16. Data integrity

The integrity of financial and operational data used in the costing system must be preserved by adequate checks and controls, which must include reconciliation of total cost data flowing through appropriate points in the system.

The total amount of input costs relating to any element of the costing system must be equal to the total amount of output costs relating to that element. In particular, the following total figures must be reconciled to each other:

- Total costs as per Royal Mail Letters' General Ledger accounts;
- Total activity costs; and
- Total costs of all Sub-products.

17. Materiality

17a) Compliance materiality

For the purposes of determining compliance with the Methodological Principles non-compliant items shall be deemed to be material if there is a resultant percentage difference that exceeds 1%. The resultant percentage difference shall be calculated by taking the cost of the non-compliant item and subtracting from it the cost of the same item if calculated under compliant conditions ("Compliance Base Cost") and dividing this result by the Compliance Base Cost.

17b) Change materiality

The Methodological Principles 1 to 16 must be applied to all material costs, including Activity costs, total Product or Sub-product costs, and unit Product or Sub-product costs.

Any change to the Royal Mail product Costing Manual will be deemed to be material if:

- There is a resultant percentage change (be it positive or negative) in the total cost of any Activity set out in the Costing Manual that exceeds 1%;
- There is a resultant percentage change (be it positive or negative) in the total cost of any Sub-product set out in the Costing Manual that exceeds 1%; and
- There is a resultant percentage change (be it positive or negative) in the unit cost of any Sub-product set out in the Costing Manual that exceeds 1%.

The resultant percentage change shall be calculated by taking the cost of each Sub-product or Activity without the change ("Base Cost") and subtracting that Base Cost from the corresponding cost of each Sub-product or Activity with the change and dividing this result by the Base Cost.

Materiality shall be measured by reference to the most recent quarterly accounts provided that where Royal Mail can justify a longer period as being more representative, then, such longer period may be used.

Appendix C Technical Appendices Contents

Appendix 1.0

INTRODUCTION

Appendix 2.0

RESOURCE MODULE

- Appendix 2.1.1 Mapping of Payroll Grade Code to ABC Manager Grouping
- Appendix 2.1.2 Mapping of Payroll Account Code to ABC Pay Type
- Appendix 2.1.3 Mapping of Manager Grouping and ABC Pay Type to ABC Cost Type
- Appendix 2.1.4 NIPOC Rates
- Appendix 2.2.1 Business Areas
- Appendix 2.2.1 Mapping of ESFS Cost Centres to ABC Business Areas and ABC Organisational Units
- Appendix 2.2.1 Cost Types
- Appendix 2.2.2 Mapping of ESFS Cost Elements to ABC Cost Types
- Appendix 2.2.2 Extract Showing Interbusiness Cost Elements
- Appendix 2.2.2 Mapping of Cost Types to Cost Type Account
- Appendix 2.5 Entering Cost Adjustments

Appendix 3.0

RESOURCE DRIVERS

- Appendix 3.0 Cost Types and Resource Drivers
- Appendix 3.1.1 SHRS Operational Activities
- Appendix 3.1.1 SHRS Operational Cycle Activities
- Appendix 3.1.3 SHRS Operational Vehicle Activities – Cross Reference to Staff Cost Type
- Appendix 3.1.3 Operational Vehicle Activities - Cross Reference to Non Staff Cost Type
- Appendix 3.1.4 Machine Hour usage by Activity
- Appendix 3.1.4 Machine Weighting by Cost Types
- Appendix 3.1.4 Machine Hour Operational Activities
- Appendix 3.1.5 Accommodation Operational Activities
- Appendix 3.1.7 PO Boxes
- Appendix 3.1.7 Surcharges
- Appendix 3.1.7 Redirections
- Appendix 3.1.7 Local Collect
- Appendix 3.1.7 Keepsafe
- Appendix 3.1.7 Timed Delivery
- Appendix 3.1.7 Bespokes
- Appendix 3.1.7 Relay Callers Office

Appendix 3.1.7	Mail Collect
Appendix 3.1.7	[Rural Newspapers]
Appendix 3.1.7	[Poste Restante]
Appendix 3.1.7	[Diversions]
Appendix 3.2	Non Operational Resource Drivers
Appendix 3.2.1	POL
Appendix 3.2.2	Customer Management
Appendix 3.2.3	Stamps and Collectables
Appendix 3.2.4	Commercial
Appendix 3.2.5	Financial Services
Appendix 3.3	Machine Analysis Data Refresh
Appendix 3.3	Accommodation Analysis Data Refresh
Appendix 3.3	Shared Activities Data Refresh
Appendix 4.0	ACTIVITY MODULE
Appendix 4.1	ABC Activities
Appendix 4.1	ABC Activity Dictionary
Appendix 5.0	ACTIVITY DRIVERS
Appendix 5.1.1	Routing Matrix
Appendix 5.1.1.1	SPHCC Weightings
Appendix 5.1.1.1	Weighting Factors
Appendix 5.1.1.3	Derivation of Collection SPHCC Weightings
Appendix 5.1.1.4	Derivation of Outward Mail Centre SPHCC Weightings
Appendix 5.1.1.4	Derivation of Inward Mail Centre SPHCC Weightings
Appendix 5.1.1.5	Derivation of Outward and Inward RDC SPHCC Weightings
Appendix 5.1.1.6	Derivation of Delivery Indoor SPHCC Weightings
Appendix 5.1.1.7	Derivation of Delivery Outdoor SPHCC Weightings
Appendix 5.1.1.8	Derivation of International Operations SPHCC Weightings
Appendix 5.1.1.9	Network
Appendix 5.1.1.10	Local Distribution
Appendix 5.1.2	Operational Direct One To One Mapping
Appendix 5.2	Non Operational Activity Drivers
Appendix 5.2.1	Non Operational Direct One To One Mapping
Appendix 5.2.2	Post Office Limited (POL)
Appendix 5.2.3	Customer Management
Appendix 5.2.4	Stamps & Collectables

Appendix 5.2.5	Commercial
Appendix 5.2.7	Manage Services
Appendix 5.2.8	Product Compensation
Appendix 5.2.9	PO Boxes
Appendix 5.2.9	Surcharges
Appendix 5.2.9	Redirections
Appendix 5.2.9	Local Collect
Appendix 5.2.9	Keepsafe
Appendix 5.2.9	Timed Delivery
Appendix 5.2.9	Bespokes
Appendix 5.2.9	Relay Callers Office
Appendix 5.2.9	Safebox
Appendix 5.2.9	Mail Collect
Appendix 5.2.9	[Rural Newspapers]
Appendix 5.2.9	[Post Restante]
Appendix 5.2.9	[Diversion]
Appendix 5.3	Allocation of Overhead Activity Costs
Appendix 5.3.1	Allocation Based on Pipeline
Appendix 5.3.1	Allocation Based on Groups of Products
Appendix 5.4	Routing Matrix Data Refresh
Appendix 6.0	PRODUCT MODULE
Appendix 6.1	Sales Product
Appendix 6.1	Sales Product
Appendix 6.1	Sales Product Traffic Sources
Appendix 6.1	Sales Product SPHCC
Appendix 6.1	Sales Product Volumes
Appendix 6.1	Sales Product Groups
Appendix 6.1	Products with no Cost
Appendix 7.0	CLASS COSTING
Appendix 7.2.2	Class Activity to Product

For availability of this document in alternative formats, please see RM licence condition 15.⁸

⁸ Document available from www.psc.gov.uk

