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THE POSSIBILITIES ARE INFINITE

Fujitsu Services input to Feasibility Study

For

End to End re-Architecting of Post Office Systems

24 March 2003

(With Pricing)

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1 Management Summary

Post Office is experiencing a major change in its operating and commercial environment. It must transform its cost base, processes and behaviours to meet the challenge.

Embracing the Joint IS Landscape arrangements from the extended Horizon agreement, Fujitsu Services has been working with Post Office analysing where cost benefits could be realized through re-architecting the current estate of Post Office systems and through adoption of new business processes.

This document sets out a blueprint for a programme of migration to a coherent system set which will deliver the target process improvements as quickly as possible and at least risk. It takes account of where natural process boundaries exist to define the logical demarcation lines between Fujitsu Services and the Prism consortium. It contains proposals to deal with the taking of contractual responsibility for delivery and operations but also considers how work might be shared in a controlled fashion among the various parties.

Fujitsu Services is pleased to submit this document, developed as an input to the Post Office E2E feasibility study and looks forward to continued joint working in the development of effective systems to support the Post Office business. All pricing and timescales assume this approach.

This paper sets out Fujitsu Services approach to the systems re-architecture, explains the design aims, outlines indicative pricing and offers a proposed implementation plan.

1.1 Post Office requirements

The analysis of the requirements has been conducted as a joint activity with Post Office IT Directorate, Business Systems and, critically, Post Office business departments. Business representatives contributed significantly through workshops and meetings with analysts and through validation and verification of findings. For the feasibility study, the focus has been on understanding the key business issues and associated costs and benefits and documenting at a high level the affected business processes. This will serve as a solid basis for subsequent analyses of the detailed requirements. The Post Office requirements that were captured during the End-to-End Feasibility Study are documented in the Business Requirement Specification dated 21st February 2003. The Business Requirement Specification document provides the requirement baseline against which this paper has been prepared.

Post Office and Fujitsu Services have identified the following as the key areas of potential savings and operational improvements:

- Stock Management (£1.9m - £2.2m annual saving identified)
    - Reductions in stock handling and transportation costs

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- Reductions in stock write-offs
- Automation of form production and reductions in form printing

- Accounting (£9.5m annual saving)
  - Reductions in product matching
  - Decrease in debt (lower write-offs)
  - Improvements in client settlement
  - Elimination of various legacy systems (esp. CBDB and OPTIP)
- Cash Management (£4m annual saving)
  - Automation of order processing in cash centres
  - Decrease in cash centre write-offs
  - Lower borrowing costs
  - Improved cash flow
- Sales (£2.5m - £5.5m annual saving)
  - Improvements in customer session support (Method of Payment)
  - Support for product-related cross-selling
  - Printing of (virtual) stock
  - Improved conformance to process through prompts and the introduction of HTML help facilities
- Management Information (£2m - £5m annual saving)
  - Availability of performance information
  - Incentivisation based on product profitability and basket analysis
  - Elimination of legacy MI systems
- Reference Data management (£1.2m annual saving)
  - Improved reference data management processes
  - Elimination/replacement of legacy reference data systems

The potential to realise the annual savings of at least £21m has been confirmed by Post Office stakeholders from the affected business areas.

It should be pointed out that £21m p.a. represents the low side of the savings opportunity. Neither has any estimate been made of revenue upside opportunities as these were outside the scope of this work piece.

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1.2 Fujitsu Services Response

This paper is Fujitsu Service's response to the above requirements. The principles embodied in this proposal are:

- Transformation of the current systems landscape is to be based on a series of projects, each delivering business benefits in it own right, as well as contributing towards the realization of the strategic systems organisation, i.e. a very different approach from the 'big bang' ERA proposed implementation;
- The projects covered by this paper are those agreed with Post Office (IT Directorate and Business Systems);
- Fujitsu Services is willing to discuss with Post Office a prime contract arrangement where management of the overall programme is undertaken by Fujitsu Services. This approach will reduce the overall programme risk and ensure single company responsibility. This is not costed into the estimates given;
- Fujitsu Services is keen to work with Post Office to identify sub-contractors who may have specific skills and experience that would position them well to undertake some of the development work;
- We have assumed that maximum use will be made of pre-paid SI for these projects. While we have estimated its use in our indicative pricing, the actual call on pre-paid SI must be made by Post Office;
- The proposed solution approach minimises costs and risks to Post Office by adopting optimum service boundaries and an incremental, step by step, approach to development which moves the business progressively towards Post Office IT Directorate's strategic architecture;
- The sequencing of projects is devised to deliver early benefits to support the Post Office objective of early return to profitability. We are however proposing an urgent start to the design work to maintain the proposed schedule;
- We have assessed in this paper how the proposed approach releases the cost savings identified in Schedule 10 of the new agreement;
- The proposed commercial arrangements aim to create the simplest possible structure within which change can be managed without undue contractual overheads.

1.2.1 Target Architecture

The proposed transformation programme aims to develop the Post Office systems towards an end position as depicted in the diagram below.

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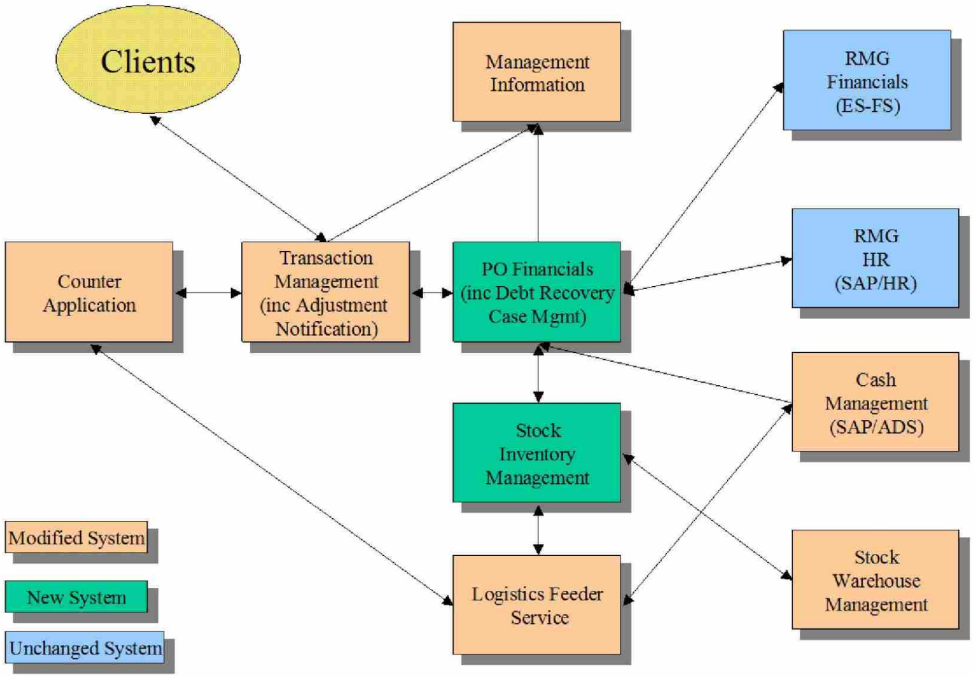

Figure 1 – Target Application Architecture

The key changes from the current position are:

- A new Financials System maintaining all the required ledgers and providing more up-to-date information on the business. It will support Debt Recovery and client settlement. This system will replace the CBDB complex (Pivot, Class, various add-on systems);
- Enhanced Management Information facilities, providing a range of management reports and support for ad-hoc queries not available from the standard financial reports (The MIS, together with the Financial System, will replace a range of existing reporting systems and tools);
- Enhanced Horizon Transaction Management System, encompassing client file transfer and reconciliation, transaction level enquiries and integrating the data flows between Counters, Financial and the Sales MI Systems. This will replace the OpTip, TPS and AP systems and be a development of the Network Banking DRS system;
- Enhanced SAP ADS (delivered by Business Systems), better integrated with the Logistics Feeder Service, which will facilitate more accurate and immediate cash reporting;
- New Inventory Management improving control over stock holdings;

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Fujitsu Services does not propose to manage all these systems. The scope of its proposals for the enhanced Horizon technical infrastructure, and the logic for that scope, are described in this document.

1.2.2 Migration steps

A set of transformation projects was identified during the requirements analysis stage, which together can result in the target systems being established. A few of the projects need to be executed in a specific order because of interdependencies, but otherwise it is possible to compose different migration scenarios addressing target areas serially or in parallel as needs and investment capability demand.

- Accounting & Cash Management Programme
  - Cash Ledger (3 projects)
  - Branch, Client & Stock ledgers
  - Completion of Financials & decommissioning of legacy systems
  - Reference Data infrastructure & processes
- Stand-alone projects
  - Automated cash ordering
  - Stock inventory management
  - Automated stock ordering
  - MI – Sales incentivisation
  - Cross selling
  - (HTML) Help
  - Printing Virtual stock
  - Local destruction of stock

The identified business benefits have been attributed to the individual projects allowing Post Office to make informed decisions on prioritisation – this information is presented in the financial summary.

1.2.2.1 Proposed Migration Approach

The proposed programme recognizes that the urgency for introduction of new or improved processes and systems must be tempered by availability of investment funding and the ability of the affected units to adapt to introduced changes. The programme has been structured to deliver early business benefits to fund the later investments.

A key outcome of the transformation programme is the establishment of a modern financial system that delivers accounting information in a timely and accurate manner.

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The new Financial System represents a major investment. To avoid a "big bang" introduction of the system and all associated processes, Fujitsu Services proposes an incremental introduction, spreading the costs over several of the transformation projects and supporting the investment in the system's development by realised benefits from the early projects. The early usage of the Financial System will be for timely Management Information. The proposed approach will result in longer parallel running of the new Financial System alongside the current CBDB complex of systems, thus de-risking transition and allowing more time to define and bed-down new business practices.

The modernisation of, and in some case creation of new, key business processes in Post Office back-office operations will result in some degree of re-work and tuning, as experience with the new business and system processes is gained. To minimise the amount of re-work, it is proposed that Post Office exploits the capabilities of the Horizon Architecture Lab, the costs of which are covered by the Commercial Terms already proposed. By prototyping key aspects of the new solution, the Lab will create a visualisation environment against which users will be able to pin down requirements for system functionality, information availability and structuring of user interfaces. This will shorten the analysis phases of projects and de-risk their implementation.

The joint working approach, which forms a key aspect of the renewed Horizon agreement, has been embraced in the analysis stage preceding this proposal. It has worked well and achieved good progress and common understanding between Post Office and Fujitsu Services. The systematic analysis adopted has delivered an overall map of business processes and a set of requirements positioned within the map. This business context now needs to be completed and it must be maintained throughout the forthcoming stages of further and more detailed analysis. To maintain the momentum and to facilitate early system improvement, the phased completion of requirements and solution design is needed in order that S60 and Project 5 can progress to plan. This should tackle both the overall business requirement (especially by completing the areas of Inventory Management and Sales and Marketing) and begin detailed analysis of specific transformation opportunities (especially Cash Management and Accounting).

1.3 Commercial approach

This paper is based on the commercial framework of the extended Horizon agreement. The proposed commercial arrangements exploit the "Working Together" processes and "Pre-paid SI" resources. However the usage of pre-paid SI is to be decided by Post Office. The indicative prices in this document are based on the following assumptions:

- It has been assumed that this programme will have first call on Pre-paid SI that is not already committed. Incremental SI charges will apply where resources over and above those in Core are required, either because of skills shortage or peaks in workload. Pre-paid SI does not cover hardware or sub-contracted resources;

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- It has been assumed that maximum use will be made of pre-paid SI and for this purpose, a broad assumption has been made that 70% of available pre-paid SI will be used for these projects;
- No discount has been assumed in relation to the additional SI resources, although forward commitment will qualify Post Office for a 20% discount subject to the conditions set out in the Amendment;
- Three releases are proposed, so as to smooth the work and minimise the demand for additional resources while still meeting the target timescales, although we will need to move at pace in order to achieve the proposed Release windows;
- Pricing is indicative and is presented on a T&M basis with no contingency. It would be prudent for Post Office to uplift these figures, either for its own contingency for T&M or to cover possible variances of a feasibility stage estimate;
- The operating fees are to cover costs, which are incremental to the contracted baseline;
- Hardware and SAP software costs are excluded on the basis that Post Office may already have spare capacity, which could be applied to the identified requirements;
- These and other assumptions and dependencies are set out in this document;
- Other new business initiatives will share Release testing costs therefore a proportion of such costs have been attributed to End to End.

1.3.1 Lifecycle process

It is assumed that the Joint IS Landscape process will be followed and that no significant resources or timescales will be expended on competing for packages of the solution.

1.3.2 System Integration

This paper assumes that the Fujitsu Services domain will include the integration of:

- Counter systems
- Enhanced Horizon Transaction Management systems (covering reconciliation with clients, on-line transaction processing with clients' agent systems (NBE, Streamline, e-Pay), support for Post Office back-office transaction processing)
- New Financial System
- Enhanced Reference Data Management Centre (RDMC) addressing all reference data needs of the Fujitsu Services systems domain
- Enhanced Horizon Logistics Feeder Service (LFS)

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Fujitsu Services will also be responsible for integration with externally provided systems and services, in particular with:

- Cash Centre systems (SAP ADS) operated by Business Systems
- Centralised file transfer facility (EDG) operated by Business Systems
- Sales Management Information System
- Any new Post Office Reference Data system(s)

1.3.3 Application Development

Fujitsu Services proposes that it will be the Application Developer for:

- Counter applications
- Enhanced Horizon Transaction Management systems
- Enhanced Reference Data Management Centre (RDMC)
- Logistics Feeder Service (LFS)

Fujitsu Services proposes to subcontract the application development of the New Financial System within its overall E2E design, and would welcome close dialogue with Post Office on who that subcontractor should be and on agreeing terms with that subcontractor. The baseline assumption that covers the indicative costs is that the development will be undertaken by Fujitsu Consulting (Fujitsu Services sister company) extensively supported by Zenzar (an offshore development company, in which Fujitsu has a significant stake) and by SAP.

1.3.4 Support and Maintenance

Fujitsu Services will support and maintain all systems within the expanded Horizon domain (to the left of the dotted line in paragraph 2.2 below), ensuring that appropriate back-to-back arrangements are in place with any supplier/subcontractor.

1.3.5 Pricing

The indicative costs provided in this document by Fujitsu Services assume T&M. No contingencies have been incorporated and the profile of costs over time is aligned with anticipated expenditure timing.

Fujitsu Services will be pleased to discuss with Post Office possibilities of a fixed price contract or a form of benefit sharing. Such discussions may be appropriate once the requirements analyses for the Transformation Projects have been completed.

In summary, to release £16.9M of annual savings, we are estimating an investment of £16.7M one off with a recurring charge of £1.3M to cover running costs and software support.

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Of these figures, £4.9M is estimated as the cost of the new financial system while £11.8M is estimated as the cost of Horizon related development. We have roughly estimated the use of pre-paid SI as some £7.1M of the Horizon related work.

Specific details of the cost breakdown is provided in Section 11.

1.4 Key Decisions needed

To achieve the required timetable for deployment of the new and improved systems, it is essential that:

- Analysis and process business design progress is maintained (authority to proceed with next phase of work is required immediately)
- Analysis of detailed Release 1 requirements needs to complete urgently and design work needs to commence during April to ensure that development can proceed to deliver within the S60 Horizon release timeframe

Other timetable considerations are covered within section 4. It is important to note that delays will result in release windows being missed and consequently will delay the realisation of the identified business benefits. Delays are also likely to cause some of the dependencies within the Horizon Agreement not being met in time for the scheduled SI commitment fee reduction in Spring 2005. Such delays would increase the future Horizon costs.

1.5 Summary

This paper has come about as a result of excellent joint working between Post Office and Fujitsu Services representatives. We believe the approach of breaking the overall project into manageable sub projects will:

- Enable the implementation to be undertaken in a risk reduced way
- Ensure that benefits are delivered early

Fujitsu Services is happy to discuss prime contractor status with Post Office and also the allocation of specific work pieces to other sub-contractors.

We look forward to early commitment to continue work thus ensuring that the exacting programme timescales can be achieved and early release of savings happens.

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2 The Target Architecture

Having formulated the E2E re-architecting programme as a series of projects, each addressing particular business needs, it is important, from the design viewpoint, to have a clear vision of the end solution and thus to avoid purely tactical developments which can inadvertently result in over complex solutions, high on-going costs and difficulties in subsequent evolution. This section describes the envisaged strategic systems estate.

2.1 Key Concepts and principles

The key principles underlying the proposed solution architecture are:

- Minimisation of duplicate functions – to reduce production/maintenance costs and improve potential for change
- Consolidation of related processing – to minimise movements of data, reduce audit and reconciliation points
- Adoption of commodity platform products – to minimise hardware and associated support costs and to maximise availability of skilled resources that can be deployed
- Use of packages, where business requirements can be mapped onto generic product capabilities
- Clean separation of functional areas to retain flexibility to insert major new capabilities in future, for example Customer Relationship support.
- Clean process boundaries to minimise the difficulties (costs) of business risk transfer and reconciliation.

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2.2 Target Application Architecture

Pictorially, the target organisation of application systems at the end of the currently envisaged transformation programme is as follows:

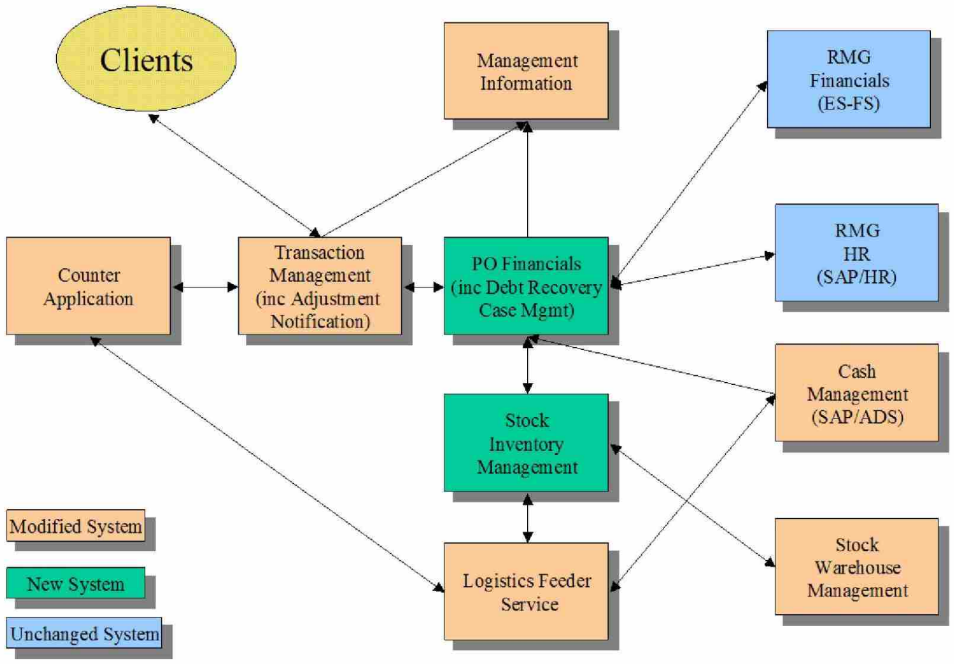

Figure 2 – Target Application Architecture

The key components of the target application architecture are:

Post Office Financials – a system managing a set of ledgers representing the full Post Office trading position. The ledgers will include accounting for branch transactions by client, and account for cash and stock. The Financial System will be fed by transaction summaries generated within the "up-stream" parts of the Horizon infrastructure. This system will also provide the necessary facilities to support client settlement and debt management and provide an auditable set of accounts.

Debt Recovery Case Management – will be a facility provided to support Debt Recovery staff in managing the resolution of branch and client discrepancies. The system will provide facilities for tracking progress in resolution of individual cases (whether these result in write-offs or demands for settlement). It will be implemented as a module of the PO Financials.

Transaction Management – this system will provide transaction-level enquiry capability as well as reconciliation of transactional-level data from Post Office branches against Client supplied files. The system will provide facilities to investigate

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transactional discrepancies and unusual trading patterns identified by Rota checks/MIS reports and will also support customer/client enquiry handling. Although the initial implementation covers Client interactions as either Horizon-initiated on-line requests or file exchanges, it is envisaged that more sophisticated access could be provided to the information managed by Transaction Management to Clients. For example, an Enquiry Portal could be implemented.

Adjustment Notification – this component within the Transaction Management system will propagate from the central operations instructions (or proposals) for adjustments/write-offs that Sub-Post Masters are requested to apply to their Branch Liability Statements via counter terminals.

Logistics Feeder Service (LFS) – will be enhanced and integrated with SAP ADS.

Management Information System (MIS) – is assumed to be an evolution of the existing Sales MI system. (An option for exploitation of SAP BW may be feasible, (see section 8) however our current understanding of the reporting requirements would require a system of very significant capacity. Clarification of the assumptions may make this option appropriate and economic.)

SAP ADS – will be enhanced to integrate with LFS and ultimately to provide PO Financials with direct feeds.

2.3 Target Systems/Application Management Architecture

The business applications will exist in a support environment comprising numerous services as described below. To minimise cost of E2E re-architecting, the already-extensive support functionality of Horizon will be re-used wherever possible.

System management - The existing Horizon System Management regime provides event management, software distribution and inventory management. These established services will be extended to the new systems introduced as part of end-to-end re-engineering.

Back-up and restore - The Maestro based back-up and restore regime already in place within Horizon data centres will be enhanced to provided tape based back-ups of new systems. Back-up will exploit the existing investment in Horizon robotic tape silo.

Archiving and Audit -The existing Horizon audit services, enhanced with Centera storage as part of the Network Banking programme, will provide archive and audit services for the new data centre services, thus minimising hardware and software investments and exploiting existing support procedures.

Security - While new services are not expected to require the same stringent level of security that is provided within the existing Horizon environment they will benefit from many aspects of the existing regime, including user management, audit and archive management, role based authentication and access control, secure network infrastructure and physical site security.

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Reference Data management - The existing unified reference data management service provided by RDMC and RDDS will be extended to the new systems within the Horizon domain ensuring that all reference information has a single point of definition while being consistent across all systems.

Capacity Management - Horizon capacity management service will be enhanced to track the capacity requirements of all new Horizon systems.

Help Desk - The Horizon help desk (HSH) will provide support for all new systems within the Horizon domain. The provision of 3rd and 4th line support will be as documented for the relevant services in the existing Horizon contract

File Transmission - Where the new systems require the transmission of files to systems beyond the Horizon domain, this will be performed via the existing FTMS service, and where possible exploiting the capabilities of the Royal Mail Group's EDG system.

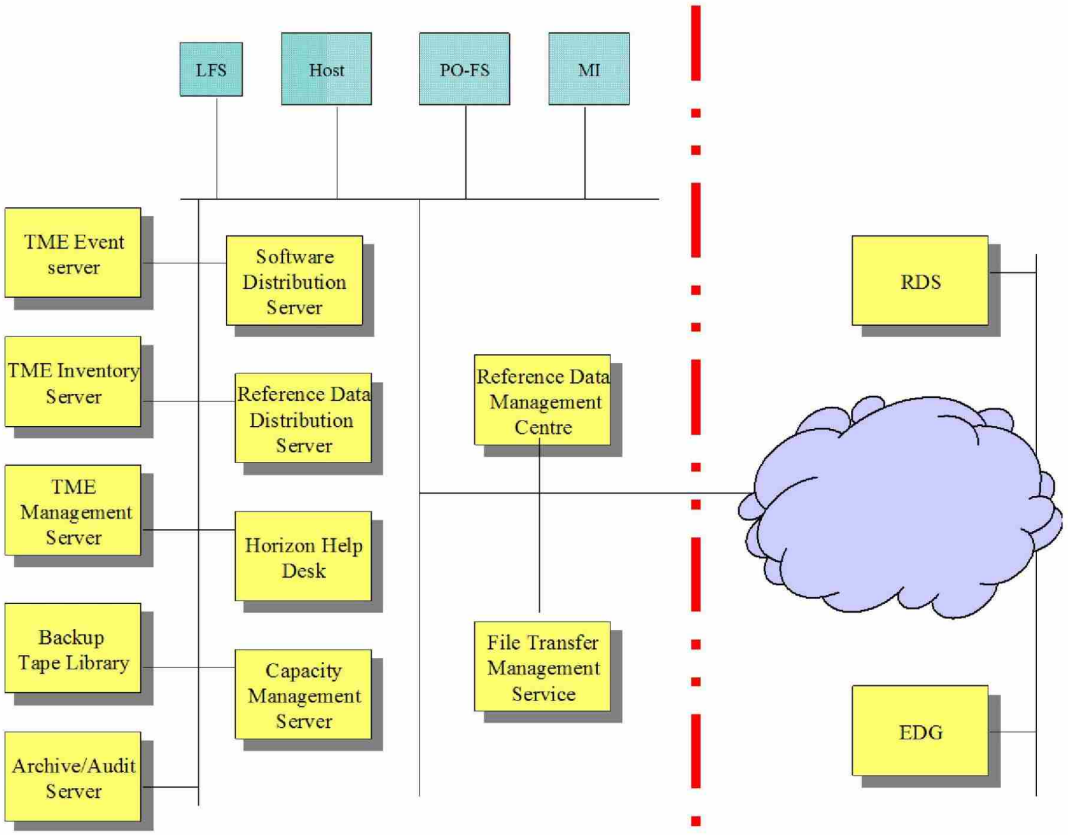

Figure 3 – Target Systems/Application Management Architecture

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2.4 Target Physical Architecture

This paper is based on introduction of powerful commodity server platforms to support the new application functionality. In particular, the Transaction Processing and Financial Systems will be implemented on Solaris platforms to take full advantage of competitive prices of hardware and associated services.

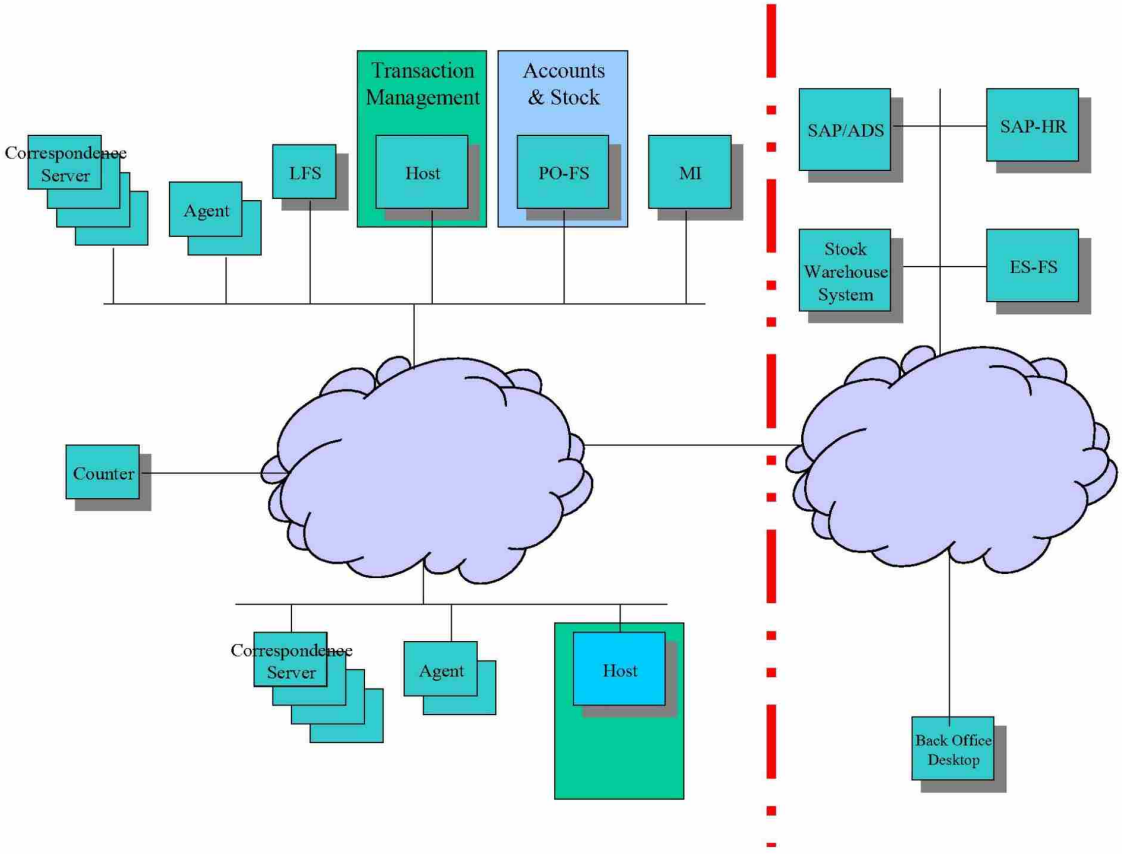

Figure 4 – Target Physical Architecture

The Horizon network and the Post Office network, on which back-office workers will reside, will be interconnected. For the purposes of this paper, the existing interconnection has not been upgraded; the capacity of the link will be reviewed when more detailed requirement is available.

2.5 Structure of systems, services and their sourcing

The target architecture and the evolution towards it strongly suggest where the optimal contractual boundaries should exist to minimise programme costs, particularly in terms of change management, reconciliation and audit overheads, management of fragmented

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SLAs and similar overheads. Additionally, it is essential that there is clear overall responsibility for integration and service delivery. The diagram below shows the proposed separation of the application estate into separately contracted domains.

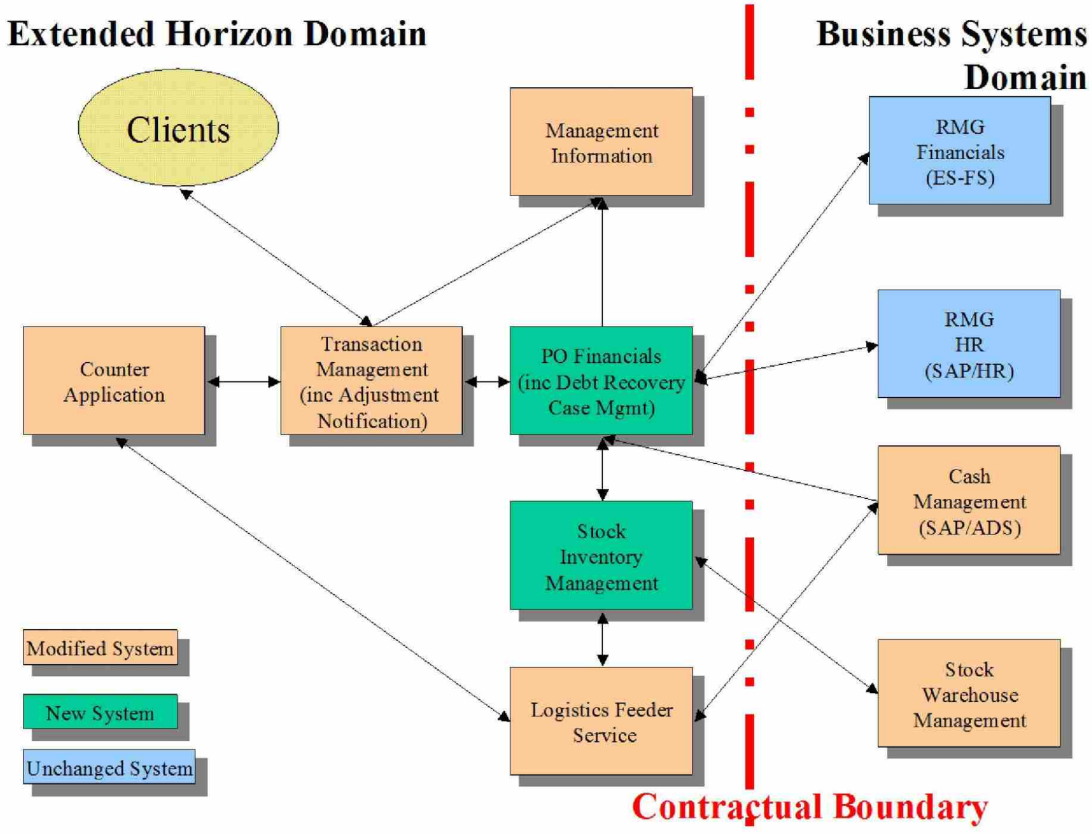

Figure 5 – Structure of systems and their sourcing

The rationale for the paper encompasses technical, financial and management benefits, specifically:

2.5.1 Stability of interfaces

The evolutionary nature of the transformation programme means that for several interfaces between systems only partial specifications will be available at any one time. If a contractual boundary were to run through such interfaces, the consequences of the interface evolving over time will include:

- Need to keep aligning both suppliers' systems and hence Contract changes (with financial implications)
- Need to align both suppliers' delivery plans
- More complex test plans and arrangements

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The E2E transformation programme, as comprehended from our work with Post Office, will introduce or affect several inter-system interfaces and systems behind them. Those which will be developed quickly and remain stable thereafter are:

- ES-FS
- SAP HR
- EDG
- SAP ADS

and therefore can be integrated across a contractual boundary without undue future problems/costs.

However, the following interfaces will keep evolving during the E2E programme, as will the functionality of systems at both sides:

- Transaction Management to Post Office Financials
- Counters to Transaction Management

and therefore should remain within the same contract domain.

2.5.2 Tight coupling of data models

The various systems within the overall estate implement overlapping data models. Where the evolution of the systems alters the models it will be important that these are maintained in step across cooperating systems. The implications of this are the same as for interfaces in the section above. The systems where such close affinity exists are:

- Horizon counters
- Transaction Management
- Post Office Financials
- MIS

And hence these systems should be managed within a single domain of control.

The pricing included in this paper assumes that the new Post Office Financials will be implemented within the Fujitsu Services domain but that Sales MIS is retained within Post Office (notwithstanding the arguments in favour of transferring it across).

2.5.3 Reconciliation, Audit

Within its contracts with suppliers, Post Office will transfer various obligations and liabilities onto the suppliers, who in turn will ensure that their solutions contain appropriate provisions for tracking their achievement (or otherwise) of the obligations and providing sufficient information to determine where they are not liable for deleterious events that may affect Post Office business. All these provisions are, of course, part of the overheads of any solution. Where inappropriate boundaries are established, the amount of information that needs to be collected and retained can be

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very considerable and in general, there will be significant duplication of data and functionality.

Within the proposed architecture, the ideal inter-system (contractual) boundaries are those that coexist with natural organisational boundaries and hence those where the "protection" mechanisms (audit, reconciliation, security firewalls etc) need to reside anyway. In particular, the natural boundaries are:

- Between Post Office and 3rd parties (i.e. client interfaces, NBE interface, external service providers such as e-Pay, Streamline)
- Between Post Office and Royal Mail Group
- Between Post Office units operating as (potentially) separate entities e.g. Branch network and Cash Centres or Stock Warehouses (which could potentially be out-sourced/sold or replaced by 3rd party suppliers)

The above reasons suggest that the following systems are logically the most separable from Horizon:

- SAP ADS and other warehousing systems
- SAP HR
- ES-FS

2.5.4 SLAs

In general, business objectives and business outcomes are measured in terms of results at the end of business process strands. The most effective Service Levels are expressed in terms directly related to business objectives. However, where suppliers contribute only partially to the achievement of business outcomes, it is necessary to devise indirect measures. The more fragmented the service provision, the harder it is to devise a set of meaningful SLAs that have a direct bearing onto business performance.

2.5.5 Support considerations

An integrated approach to supporting the deployed IS/IT services is required. It is essential that the responsibility for resolution of any problem is clearly identifiable and that a single party is managing the delivery of the solution to a particular problem within required time constraints.

2.6 Service operations and support

The target architecture introduces new systems and services, which need to be managed, operated and supported. The following arrangements, above those already covered by the Horizon agreement, are proposed:

- New Financial System – to be deployed within the manned Horizon Data Centre and operated alongside the other Horizon central systems. The co-location of the systems will allow consolidation of audit, archiving and back-up facilities and

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services as well as maintaining close proximity of the Financial System to its main (volume) source of data (i.e. the Transaction Management System). The integration within expanded Horizon enables Fujitsu Services to take responsibility for the complete transaction processing activity culminating in the ledger outputs, without the need for mid-process reconciliation.

- Management Information System – it is proposed, but not assumed, that Sales MIS will be transferred to the manned Horizon Data Centre where it will be operated and maintained. The rationale for this move is as for the Financial System with respect to operational synergies.

The Horizon Support Desk will field all second line support for Financial and MI Systems.

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3 Transformation Projects

3.1 Baseline Assumption

The transformation projects, which collectively represent the End-to-End re-architecting programme and which are described below, are expected to be carried out from a baseline position, comprising the existing Horizon technical infrastructure and services amended by the following changes/developments which have been assumed to be committed as part of other programmes:

- Exploitation of EDG for client file deliveries
- AP enhancements implemented to insert additional transaction data at the counter (i.e. avoiding central data entry into transaction stream)
- Migration of Horizon central processing from Dynix to Solaris
- Mails 3.3

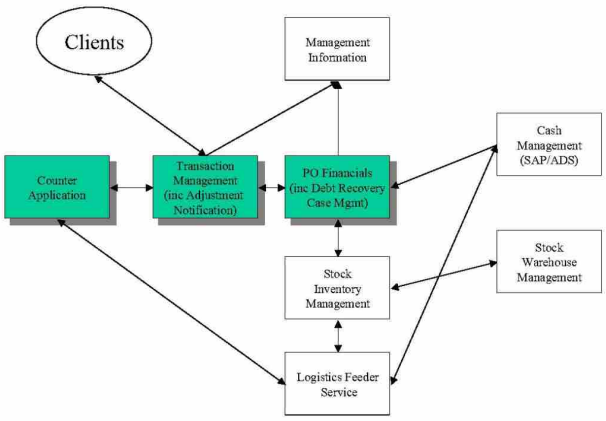
3.2 Projects

The individual Transformation Projects are described in the following subsections and for each, the application architecture diagram illustrates, by shading, which components of the overall architecture are affected by the project being described.

3.2.1 Project 1 - Better Overnight Cash on Hand Data

Within the Cash Management function two fundamental changes have made Post Offices funding position a critical business survival issue:

- The business is trading at a loss
- The migration of benefit payments from order books to ACT will be accompanied by the loss of pre-funding by government departments of the necessary cash in the network



The business will have to borrow funds to fund any trading losses and working capital needed in branches. Such borrowing is limited in availability and its costs reduce profitability. From April 2003 the DTI will provide a loan and will require a robust statement of cash holding as security.

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To support the business in managing through this difficult situation, the business requirements, detailed below, will be addressed by this project:

- To be able to accurately identify physical cash at the branch rather than overall cash which can include cash equivalents such as cheques.
- Improve management information, linked to financial statements, to support the management of cash
- Drive down cash holdings and therefore reduce the DTI borrowing requirement, which in turn will reduce the level of interest paid.
- To be able to forecast and manage cash-flow within the DTI target (£330m for 2002/03)

The first project being proposed addresses the above funds-related requirements by providing summaries of values by different methods of payments, and in particular by maintaining a central "Funds Ledger" showing the daily funding position for the whole of Post Office.

It is proposed that a skeleton "Financial System" be introduced (which will evolve to the full Financial System with subsequent projects) to implement the Funds Ledgers. Initially, only Method of Payment movements will be posted to the Financial System, namely, details of any funds Remitted-in or Remitted-out of each branch, together with the net change in the branch's funding position, as a result of the transactions that have been carried out with customers. This will facilitate tracking of the overall funding position of each branch and for the totality of branches.

To establish the total consolidated cash position, Cash Handling Centres will be treated as pseudo-branches. Movements of cash between Banks and the Cash Centres and movements of Cash to and from Branches will together provide the overall Cash Position for the organisation. Of this total, the amounts assigned to the care of postmaster agents, the amounts held on Post Office premises and cash in transit will all be clearly identified.

The following issues need to be addressed to improve accuracy of funding visibility:

- Eliminate the inaccurate use of "Fast Cash" at settlement when the method of payment is not actually cash

Our understanding is that some SPMs use Fast Cash when they have actually received a cheque, and subsequently "convert the cash into a cheque". Work is required to investigate the frequency of this: it is proposed that this type of transaction is flagged as being of interest to Verification.

- Effect of less than 100% polling of branches each day

The current requirement is to successfully poll 97% of branches each day, and normally achievement is significantly higher. There are two options for dealing with non-polled outlets:

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- Accept latest balances available from when the outlet was last polled (as a result the overall position should be no more than 1% inaccurate, but this percentage could rise if some major event caused a high non-polled situation)
- Develop functionality that identifies non-polling outlets and provides estimates based on historical and/or partial data (this requires retention and use of appropriate historic data and could prove costly).

The first option is assumed in the priced solution.

3.2.1.1 Outline Solution Design

The following provides an overview of the design:

- The Counter Settlement Process will be enhanced to endorse any cheques used in Settlement with details of the counter session, thus associating cheques (that are later remitted to the clearing system) with sessions and allowing identification of cheques potentially accepted outside of normal counter operation.
- As part of the Branch EOD process, a summary of Fund Movements will be produced
  - This summary will include all Method of Payment "products".
  - Remitting-In and Remitting-Out will be summarised separately from other transactions. Adjustments will be summarised separately, since they may be of significance. (They represent cash being swapped for cheques, for example.)
- Such summaries will be harvested to the central Transaction Management System
- The movements will be posted to the Financial System
- The Financial System will be set up to receive the cash movements by branch with the branches being set up as Profit Centres on SAP
- An outline chart of accounts needs to be determined and details established for the accounts relating to Funds reporting
- The ES-FS interface requirement and summary chart of accounts used by RMG needs to be considered so that implementation of this project anticipates future evolution
- Accounts will be set up in the balance sheet for the various Method of Payment to capture the cumulative cash position
- As far as possible, Cheque processing process, for which support is to be implemented in a later project (P2), needs to be anticipated to avoid any later re-work

Balance Sheet reporting (SAP Financial Statements) will be set up to capture the outline balance sheet and the detail for accounting for funds

NB Trading Day concept will be implemented with agreed and consistent period end closing.

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3.2.1.2 Sizing and scalability

At the branch, the summarisation work will be done as part of the EOD processing.

Centrally, a Funds Movement Report will be produced from each Branch for each day. This means that up to 18,000 such summaries will be posted to the Financial System each day. Existing scalability mechanisms within Horizon will handle this load and the SAP system has been sized accordingly.

The SAP R/3 system is scaleable, however with the expected volumes, Fujitsu Services recommends that stress testing should be carried out during the implementation. This has been assumed in the costs. To ensure that the systems performance is optimal, Fujitsu Services will exploit the SAP Competence Centre at Fujitsu Siemens Computers to carry out QA checks on the system before go-live and also, periodically during operations. In support of the estimates within this document, experience of Fujitsu Consulting SAP Practice and of SAP has been employed.

3.2.1.3 Security Approach

No special security implications have been identified. The SAP product provides role-based authentication enabling appropriate business related controls to be defined and managed in a scalable way. The SAP server will be set up within a DMZ, and appropriate firewalls and rules bases will be implemented.

3.2.1.4 Resilience requirements

Existing Horizon resilience provisions will continue to deliver dependably the output files from the current Horizon TPS Host.

See also section 3.3.2.4.

3.2.1.5 Operational requirements

The main requirement here is to deploy the new Financial System, establish Super-users and continue to operate the service.

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3.2.1.6 Expected Deliverables

3.2.1.6.1 New or enhanced functions

Component	Description
Counter	
	Cheque Endorsement
	EOD production of MoP Movement Summary
Agent	
	TPS Harvester to Harvest Summaries
Host	
	Produce SAP Interface file from TPS Host
Ledgers	
	Ledger entries in the SAP 'funds ledger'
	Exceptions handling for un-posted BAPIs

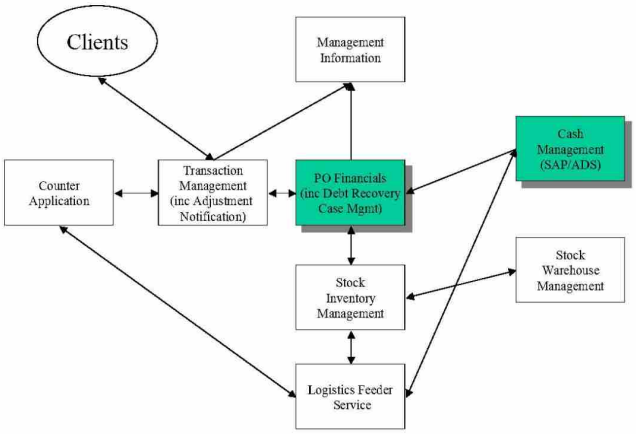
Table 1 – Project 1 Functions

3.2.1.6.2 New or enhanced Interfaces between systems

The interface from the branch to the Data Centre will continue to use the existing Riposte messaging middleware.

The interface to the Financial System is described in Section 3.3.1. It will be based on XML summaries from the Transaction Management system fed into SAP using standard IDOCs and BAPIs. This is a standard way of introducing documents into SAP.

3.2.2 Project 2 - Automated Ledgering for Cash / Bank



Recognising the business critical nature of the management of Post Office's funding, part of the previous project (see Section 3.2.1) was to enable information on cash movements to and from the Cash Centres to be recorded in the new Financial System. It is anticipated that initially posting of Cash Centre movements would be done manually, however as a second step this project will provide an interface between SAP ADS and the new Financial System to automate this flow thus further improving the accuracy and timeliness of cash holding information.

Furthermore, details of Bank movements will be recorded in the ledgers, thus maintaining the total position of Post Office's funds.

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The specific business requirements addressed by this project will:

- improve the integration of cash centre holdings into cash-flow management
- bring together all the elements of cash-flow and provide cohesive management to deliver cash-flow targets.
- deliver a single, comprehensive view of cash (funds) in one place
- improve management information, linked to financial statements, to support the management of cash (funds)
- enable cash holdings to be driven down and therefore reduce the DTI borrowing requirement, which in turn will reduce the level of interest paid.
- facilitate forecasting and management of cash-flow within the DTI target (£330m for 2002/03)
- enable proper accounting of cash when the new Financial System becomes the corporate ledger system

3.2.2.1 Outline Solution Design

The main focus for this project involves changes to SAP ADS (in the Business Systems' domain) with some work involved in developing the Financial System to utilise the information feed. The procedure for accounting for cheques (as reported from the cheque handling centres and banks) also needs to be established at this point to ensure the ledgers reflect the process and to efficiently report the position accurately.

The requirement is for a SAP ADS interface to be defined, which enables the data to be loaded from a file into the Financial System and for the file to be delivered from SAP ADS and loaded each evening.

It is assumed that SAP ADS will conform to the same input file format for the Financial System as that defined in Sections 3.2.1. The Cash Centre is assumed to be treated like a branch and therefore the flow of information into the Financial System will reflect the Cash Centre as another branch. The Financial System will be extended to handle the information coming from SAP ADS.

The interface will effectively produce a journal into the ledgers to account for the cash movements in the cash centres and also any external sales that occurred in the Cash Centres.

The information passed to the new Financial System will neither include the detail by stock keeping unit (SKU) nor by denomination.

This project will also address the bank information flow to the ledgers directly from the bank. It is assumed that the information is available electronically and that it can be uploaded directly into the SAP FI bank account, to confirm the cleared cash position at the bank.

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3.2.2.2 Sizing and scalability

There will be a single feed per day from SAP ADS to the Financial System, the volume of data transmitted is assumed to be insignificant

3.2.2.3 Security Approach

A logical link will be provided between SAP ADS and the Financial System exploiting the Post Office and Horizon physical networks. Initially this assumes exploitation of FTMS to pull the file from Huthwaite to the Fujitsu Services Data Centre where it will be placed in the Input area for the Financial System.

No special security implications are assumed.

3.2.2.4 Resilience requirements

Normal FTMS resilience implemented within Horizon is considered appropriate.

3.2.2.5 Operational requirements

Normal FTMS Operation, together with exploitation of the Horizon automatic audit of data received.

3.2.2.6 Expected Deliverables

3.2.2.6.1 New or Enhanced Functions

Component	Description
Ledgers	
	Extend Cash Ledger to receive Cash Centre information
	Cheque accounting procedure and ledgering
Host	
	Produce SAP Interface file from SAP ADS
External	
	Bank file interface

Table 2 – Project 2 Functions

3.2.2.6.2 New or Enhanced Interfaces between systems

The interface to the Financial System, described in Section 3.3.1.

3.2.3 Project 3 - Automatic Cash remittance of pouches into branches

To further improve the accuracy and timeliness of the Cash Management view of Post Office's funding, over and above the improvements made by the previous projects (see Sections 3.2.1 and 3.2.2) this project will ensure notification, to central systems, of movements of cash between Cash Centres and branches.

The particular business requirements being addressed by this project are:

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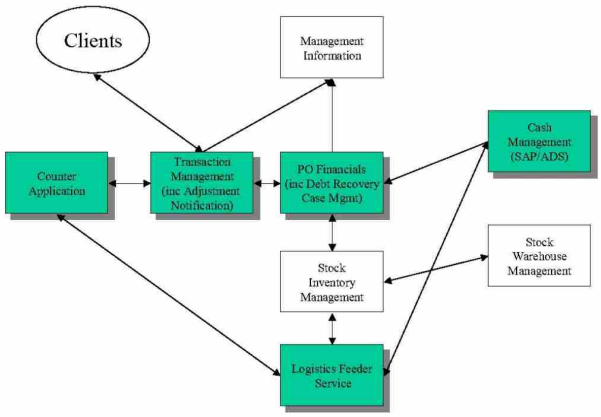
- To improve the financial controls for cash remittances (where there are currently losses of £5m per annum)
- Improve management information, linked to financial statements, to support the management of cash (funds)
- To enable cash holdings to be driven down and therefore reduce the DTI borrowing requirement, which in turn will reduce the level of interest paid.



- To be able to forecast and manage cash-flow within the DTI target (£330m for 2002/03)

These requirements exist for both Cash and Stock pouches, however they have not been identified as a priority for the Stock management function to same the degree as for Cash management. Therefore, this project only addresses increasing the control of Cash pouches.

It is currently permissible for a Pouch to be received by a branch, but for details of its contents not to be "Remitted-In" to the counter system for some time. This results in the contents not being properly accounted for within the overall system, and in particular for any Cash not being reported as belonging to the branch until it is Remitted-In, thus presenting an inaccurate view of the overall Cash Position.

A Delivery Note is produced by the systems as soon as the pouch is delivered as a receipt for the person making the delivery. An electronic version of this Delivery Note is also passed back to SAP ADS (via LFS) indicating that a pouch has been received at the branch. However there is nothing recorded at the time indicating what the content of the pouch actually is (and at present there is no way of telling within the system).

The proposal is to ensure that the value of the cash is automatically Remitted-In to the outlet as part of the Delivery Process. There are a number of possible ways of achieving this, however the mechanism selected is:

The Cash Centre / Stock Warehouse functionality is extended to produce a "Delivery Notification" when the pouch is packed and to pass this through SAP ADS to LFS and hence to the counter such that the Delivery Notification will normally arrive at the outlet prior to the pouch.

When the barcode on the pouch is scanned, the Delivery Notification will be found and the content can be used to Remit-In the content as defined by the Cash Centre / Stock

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Warehouse. If the Postmaster subsequently finds any errors, then these can be recorded as Discrepancies.

Note that the current system allows the postmaster to Remit-In whatever value he likes and it is left to some central processing to identify any mismatches between what is Remitted-In and what was Dispatched. Forcing the Despatched values to be Remitted-In and then highlighting any Discrepancies should simplify the central processes.

One drawback of this approach is that if the Delivery Notification has not arrived at the outlet before the pouch, then it will not be possible to do an automatic Remit-In. This is expected to be the case in about 1% of pouches assuming that Delivery Notifications are produced overnight. The figure may be a bit higher if they are generated the same day as the actual pouch delivery. The detailed requirements analysis will define the action to be taken in these cases.

3.2.3.1 Outline Solution Design

The following provides an overview of the design:

- An additional file feed will be provided from SAP ADS to LFS providing details of the Delivery Notification. Such files would be sent periodically as required. A detailed timetable of when such files are likely to be delivered will be agreed.
- The LFS Host will be enhanced to pick up these files and to process the content into a new Interface table in a similar way to that in which Planned Orders are processed.
- An agent will be provided to distribute the Delivery Note to the branch.
- Consideration will be taken as to the scheduling of inward connections from counter to ensure that there is a reasonable chance of the Delivery Note getting to the counter in time. The working assumption is that there is no need to change the current schedule, which is designed to support the flow of LFS data from the branch to the Data Centre.
- Changes, at the counter, will be made to the LFS Delivery screen. In summary:
  - The receipt of a pouch will initiate a search for the associated Delivery Note
  - If the Delivery Note is found, the system will Remit-In the contents automatically
  - The clerk will have the option to check the contents (now or later) and a separate dialogue will allow him / her to declare any discrepancy between the amount Remitted-in and the actual content. Any such discrepancy will then be handled as a suspense item until the matter is resolved. Note that the pouch number is used as a "link" for any such transaction to allow any subsequent error correction to be managed.
  - If the Delivery Note is not found, then the Delivery Notification returned to SAP ADS will indicate that fact.

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- When the Delivery Note arrives the Auto Remit-in of the content can take place as a background process.

  Then, a further Delivery Notification will be sent to SAP ADS informing it that the pouch has actually been Remit-in.

- Any additional Delivery Notifications would be handled using the existing LFS Harvesting mechanisms.

3.2.3.2 Sizing and scalability

Cash Deliveries take place no more than twice per week per outlet, so the volume of Delivery Notifications will be about 5,000 per day.

3.2.3.3 Security Approach

No additional security considerations are envisaged. The existing link between Horizon and SAP ADS has the required security.

3.2.3.4 Resilience requirements

Normal FTMS resilience facilities are assumed.

3.2.3.5 Operational requirements

There may need to be additional deliveries from SAP ADS to Horizon. A schedule for such additional deliveries will be defined as part of the detailed design. When the branch Remits-In the pouch this information will be included in the feed to the ledgers with the transaction data stream.

3.2.3.6 Expected Deliverables

3.2.3.6.1 New or Enhanced Functions

Component	Description
Host	
	Receive Delivery Note from SAP ADS
Agent	
	Load Delivery Note to Riposte
Counter	
	Auto Remit-In when Delivery Note Received
	Dialogue to Reconcile Delivery Note and Pouch raising discrepancies if necessary
	Handle Late arrival of Delivery Note
Ledgers	
	Extend accounting to receive the remitting-in and out information

Table 3 – Project 3 Functions

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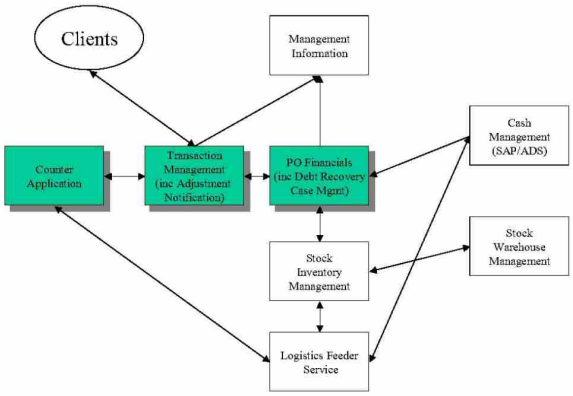
3.2.3.6.2 New or enhanced Interfaces between systems

Additional data flows need to be defined and to be carried by the existing systems interface from Horizon to SAP ADS.

3.2.4 Project 4 - Branch Liability Management

Within the "Accounting, Reconciliation and Settlement, including Debt Recovery and Branch Control" area of the business the following key business priorities have been identified:



- Simplify identification of debt
- Reduce the amount of reconciliation
- Increase the amount of debt recovered
- Put the emphasis on clients and customers to validate the data
- Simplify branch processes by reducing the amount of paper
- Centralise/consolidate agents debt
- Enable matching of cash at branches with settlement with client

In recognition of these priorities this project addresses specific requirements behind these business drivers and issues:

- Re-focus on Debt Recovery (financial recovery of money), target 95%
  - Only 10% of discrepancies are actually debt
- Establish a central debt-monitoring environment to enable the identification of debt with a high degree of accuracy
- Increase accounting control in branches
- Improve timing, accuracy, granularity and summarisation levels
- Establish an appropriate and flexible accounting hierarchy
- Modify the method of recovering debt e.g. using payroll for agents

Branch Debt is currently identified within the Transaction Processing system when the Cash Accounts are being checked. Generally this means that it is of the order of two or three weeks after the original Debt was incurred before it is spotted and investigated.

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The next (analysis) phase of the programme will carry out a complete analysis of what activities at the outlet can result in a need for Debt Recovery. The following are candidates:

- Discrepancies identified during Stock or Cash Declaration process that the Postmaster is not prepared to accept.

As part of the Declaration process the Postmaster will be given the option of "making up the difference" when a discrepancy is spotted (effectively selling him / her the stock if it is a stock discrepancy or topping up the cash in the till in the case of a cash discrepancy). Alternatively he can refuse to make up the discrepancy and force the discrepancy into a "suspense" account for later resolution.

- Discrepancies found during Remitting-In of pouches (see section 3.2.3)

In addition, it is anticipated that the following activities will be carried out centrally as part of the Debt Recovery function:

- Rota Checks. These are periodic checks of any supporting paperwork provided by a branch against (currently) the Cash Account. This process can give rise to some additional discrepancies that need to be resolved.
- Activity Checks. These are analyses of transactions in a branch against statistical trends where any unusual transactions are identified and investigated. Unusual transactions may also be identified where the volume or value of particularly vulnerable transaction types exceed some pre-defined thresholds.
- Cheque checks. The handling of cheques provides a number of opportunities for errors, which may not be visible in the branches accounts. For example, the number or values of cheques received at the "cheque-processing centre" may not match that Remitted-Out of the branch. In addition there are further opportunities for cheques to generate errors (for example they could "bounce")

To address these issues, an enhanced Transaction Management system will be introduced, initially only providing the functionality to support the Branch Debt Recovery process The project will introduce the Branch Liability Statement concept.

The scope of the project is as follows:

- The Transaction Management System will not, at this stage, be linked to the Reconciliation mechanisms for Banking, Debit Card and AP clients. Reconciliation will continue to operate through the current Cash Account mechanism managed by existing systems.
- Enhancement of the Financials System, introduced in section 3.2.1, to record summaries of all branch activities (i.e. not just the cash movement).

This will implement the first part of the Debt Recovery and Verification processes and provide support for investigation of Branch Discrepancies.

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For discrepancies and issues identified within the Financial System, the Transaction Management system can be used to examine the detailed transactions that make up the problem ledger entries.

A key aspect of the solution is the concept of "correcting transactions", to be applied at the Branch based on information generated in the centre. This will to keep the Branch Liability (as seen at the outlet) in step with the central view of Branch Liability. The proposed solution is to centrally generate "correcting notices" and propagate them automatically to Branches. It is for the Postmaster to endorse the correction and thereby create a new transaction, which brings the accounts back into balance. The nature of the correcting notice will vary according to the underlying problem: typically a write-off of a small keying error or bounced cheque, which had been correctly administered, or alternatively an increase in the Post Master's liability if it is determined that stipulated checks were not carried out correctly in the Branch. Write-offs could be made automatic whereas in all cases where the Post Master is invited to increase his liability he would be expected to acknowledge acceptance of the correcting transactions before they are applied.

The benefit of the proposed approach is that the new processes can be introduced before all the new facilities/enhancements in the back-office systems are implemented. The manner in which any corrections are applied to the Branch Position (as reflected in the Branch Liability Statement) means that the corrections will flow through to both the Cash Account and to the Branch Liability Statement, thus enabling the parallel back-end systems to "keep in step".

In terms of system developments and implementations, this project is split into two parts:

- Transaction Summarisation and Posting
- Discrepancy Correction Notification

They are considered separately below.

3.2.4.1 Transaction Summarisation and Posting

3.2.4.1.1 Outline Solution Design

The following provides an overview of the design:

- As part of the Branch EOD process, a Summary of the Branch's trading for that Trading Day will be produced.

All transactions will be summarised, to simplify their posting to the Financial System.

Transaction data will be enriched to include its Trading Date as an attribute.

- Support will be provided to enable counter processes to operate without the need to roll-over Stock units into new Cash Account periods. This will be implemented in such a way that the use of Cash Accounts can be removed by activating a Reference Data change when the cash account is no longer required (i.e. in a later project).

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- Summaries will be harvested to the Transaction Management system
- Movements will be posted to the Financial System.

The interface introduced at 3.2.1 will be further extended to support this flow

In addition to producing the summarisation of the day's transactions for posting to the Financial System, the branch system will be enhanced to produce the BLS locally at the branch at any time (on request).

3.2.4.1.2 Sizing and scalability

EOD processing will generate about 18,000 Summarisations daily, to be passed from the Transaction Management System to the Financial System. This volume of data is assumed to fit into a single file, which can be loaded into the Financial System.

3.2.4.1.3 Security Approach

No special security implications have been identified.

3.2.4.1.4 Resilience requirements

Existing resilience provisions will continue for delivering the output files from the TPS Host.

See also section 3.3.2.4.

3.2.4.1.5 Operational requirements

User administration is introduced for Post Office users that require access to the Transaction Management and Financial Systems.

3.2.4.1.6 Expected Deliverables

3.2.4.1.6.1 New or Enhanced Functions

Component	Description
Counter	
	EOD production of Trading Summary
	Produce BLS Report
	Include Trading Date in all Transactions
Agent	
	TPS Harvester to Harvest Summaries
	Transaction interrogation for investigation of errors
Host	
	Produce SAP Interface file from TPS Host
Ledgers	
	Profit Centre and Cost Centre accounting
	Accounts receivable – Agents liability

Table 4 – Project 4a Functions

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3.2.4.1.6.2 New or enhanced Interfaces between systems

The interface from the branch to the Data Centre is based on the existing Riposte messaging middleware.

The interface to the Financial System is described in section 3.3.1.

3.2.4.2 Discrepancy Correction Notification (DCN)

3.2.4.2.1 Outline Solution Design

The following provides an overview of the design:

- A DCN service will be introduced within the Transaction Management System and Financial System. Errors detected within the Financial System, will periodically be notified in the form of Discrepancy Notices to the Transaction Management System.

It is assumed that it is sufficient to distribute such Notices daily, and hence that this mechanism can be incorporated into the overnight Bulk processing.

The Transaction Management System will cause the Notices to be distributed to the Branches where the necessary adjustments can be made to the BLS.

The distribution of Notices will be achieved by exploiting Horizon's existing memo distribution capability.

- The counter will be developed to react to Notices.

To ensure that branch staff is aware of changes to the branch position, the following simple mechanism is proposed to be implemented:

  - The Notice will be encapsulated in a Memo aimed at the Manager / Supervisor
  - When the Memo is viewed at the counter, the Postmaster will be given information to enable creation of a normal "Error Notice" transaction, which is already supported on the counter.

- During this project the complete E2E process for handling DCNs (including those where the Postmaster declines to action an increase in his liability) needs to be designed (including the ledgers).
- The process and data flows for cash and stock declaration will be specified including the processing of discrepancies.
- The reconciliation and interrogation requirements will need to be defined.
- Within the Financial System, the processing of identified discrepancies will utilise "suspense accounts" and "open item" functionality of SAP. By matching items, using unique references, it will be possible to identify which discrepancies remain open.

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3.2.4.2.2 Sizing and scalability

The volume of Error Notices is expected to be modest. It is assumed that there will be less than one per branch per week, i.e. no more than 3,000 per day.

3.2.4.2.3 Security Approach

There are no special security implications, given that the Postmaster is assumed to control the entry of any Correcting Transactions rather than the system doing it autonomously.

3.2.4.2.4 Resilience requirements

No specific additional requirements were identified. It is assumed that Error Notices could be delayed for a number of days due to network failures. However this is seen as acceptable as it still represents a significant improvement above the current procedures, which rely on the post.

3.2.4.2.5 Operational requirements

The new Discrepancy Correction Notification Service needs to be set up and operated.

3.2.4.2.6 Expected Deliverables

3.2.4.2.6.1 New or Enhanced Functions

Component	Description
Host	Import Error Notices from Financials and make available to Agent
Counter	Dialogue to allow Postmaster to Accept Reject Error Notice
Ledgers	Accounting for discrepancy correction notification

Table 5 – Project 4b Functions

3.2.4.2.6.2 New or enhanced Interfaces between systems

The interface from the branch to the Data Centre is based on the existing Riposte messaging middleware.

The interface to the Financial System is described in section 3.3.1.

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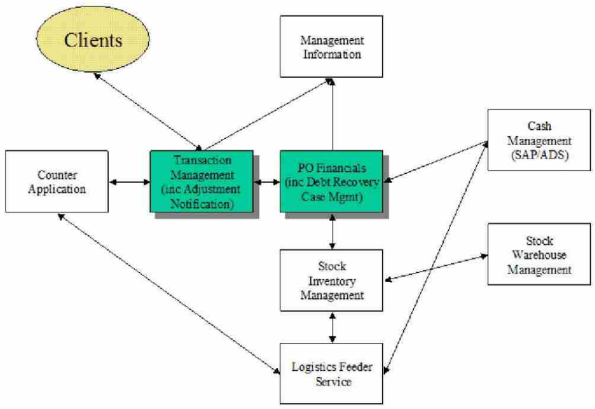
3.2.5 Project 5 - Client Settlement and Ledgering

As identified within the "Accounting, Reconciliation and Settlement, including Debt Recovery and Branch Control" area of the business, the following priorities remain after completion of the previous project (see Section 3.2.4):



- Reduce the amount of reconciliation required
- Put the emphasis on clients and customers to validate the data
- Enable matching of cash at branches with settlement with client

This project is designed to specifically address the following business requirements:

- To report Business and Client information separately and accurately
- Deliver performance measures of throughput and the actual financial debt
- Rationalise legacy systems for reporting of client and business information
- Improve timely data availability, accuracy, granularity and summarisation levels
- Avoidance of losses from remittances and client settlement
- Accounting and settlement on Post Office data, not clients'
  - (It should be noted that settlement estimating can produce positive or negative interest position)
- Cash centre accounting is manual, weekly, therefore no through view from transaction to settlement

Client Settlement and Ledgering is one of the main sources of Transaction Management work, requiring reconciliation of transactions with clients and the accounting of any discrepancies that emerge from this. The Transaction Management System will provide the interface to all client systems (both AP and on-line) and perform reconciliation associated with such clients. The new Financial System will take over the support for client settlement, thus enabling the settlement to take place based on the actual figures available from the Transaction Management System reflecting the actual feeds to the clients.

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Further analysis, expected during the next phase of the programme, will determine the precise approach to be adopted for migration of financial information between the legacy and the new system.

3.2.5.1 Outline Solution Design

This development may best be portrayed as an integration of the current Horizon Host Systems to provide a single Transaction Store for the Transaction Management System. This project should have no impact on the counter. At the Data Centre the following changes are needed:

- Create a single Transaction Source for all Transactions.
- All Transactions will be passed onto the MI system. This should be considered to be an equivalent to the current OPTIP flow.
- Summaries of transaction volumes (from the BLS) will be passed through a new interface to SAP HR to support Postmaster Remuneration
- EOD Information is required to enable "closed days" to be identified, thus allowing Reversals to be "netted out", and also to enable "Non-polled" information to be available to users.
- A User interface will be provided to enable Post Office users to enquire of the Transactions being held.
- Any Transactions currently processed by DRS or APS will be retained for a period to support investigation. The remainder can be discarded once they have been passed to MIS
- The following changes will be made to the APS functionality:
  - The need to compare the AP data with the TPS Data will be eliminated since there will now only be a single flow.
  - Client Summaries will be produced and reconciled based on the Trading Date held within the Transactions rather than as at present. The Client Summaries will be output as a "posting file" for the Financial System. Assembly and delivery of files to clients will be as at present.
- The analysis of the client flows to accounts payable in the ledgers will need to be finalised. It is expected that clients will be managed on an "open item" basis and ensuring that settlements are easily processed and that liabilities are easily identified at any point in time.
- In SAP, clients will be set up as vendors. Several vendors will be created for clients with several products. The accounts will thus be separated to reflect possibly different attributes that need to be associated with them e.g. because there are different terms of payment. Vendors can be grouped together. In the case of Girobank accounts, these accounts will be set up separately in the first instance and grouped together for payment purposes. This structure will facilitate evolution, for example when Girobank is no longer used.

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- Automatic payment runs from accounts payable will generate a BACS file, which will be transmitted to the bank. The bank will carry out the client settlement. Manual payments can also be processed through this route.
- SAP will receive client master data from the Reference Data Management Centre.
- The following changes will be made to the DRS functionality:
  - C112 flow from TPS Host will be eliminated (no longer be needed)
  - A "posting file" for the Financial System will replace a set of Reports. This Posting File will reflect the Settlement information received from the Client (e.g. NBE or Streamline)
  - The MSU process will be changed to operate on reports from the Financial System, however it will still move Reconciliation Discrepancies into Final State when they have been fixed
  - The current "Exception Reports" generated by DRS will be replaced by the ability to drill down and view Transactions in Exception states.

Having made these changes a single Transaction Management system will have been created instead of separate TPS, APS and DRS Systems. LFS will continue to provide the SAP ADS interface, though this may also be considered to be part of the Transaction Management System.

3.2.5.2 Sizing and scalability

The volume of Data should be no different from the present (together with the additional data generated by earlier projects). However, the retention of data will change as follows:

- Client Transactions (i.e. existing DRS and APS) will be held for 56 days.

It is assumed that any exceptions will have been resolved in that time.

- Information on non-polled outlets will be held for a similar period
- Other transactions will not be retained once they have been delivered to the MIS system
- Transaction Summaries will not be retained once they have been delivered to the Financial System and SAP HR.

It is assumed that there will be at most 150 users of the Transaction Management System, all from Post Office.

3.2.5.3 Security Approach

Further discussions with Post Office will be needed to ascertain what security controls need to be implemented for user access to systems within the Horizon Data centres.

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3.2.5.4 Resilience requirements

The new Harvesting process will ensure that no Transactions are lost and that any duplicates (which can arise following failures) are eliminated.

See also section 3.3.2.4.

3.2.5.5 Operational requirements

It is assumed that the new Transaction Management System workload will fit into the current Horizon Host systems.

3.2.5.6 Expected Deliverables

3.2.5.6.1 New or Enhanced Functions

Component	Description
Host	
	Create Transaction Management DB
	Load data as required (from Riposte Audit)
	Generate MIS feed of all Transactions
	Feed of Summaries to SAP HR
	Support current DRS and APS functionality based on the new Transaction feed.
	Pass AP Client Summaries to Financial System
	Pass DRS Reports to Financial Systems
	Base DRS Reconciliation on Financial System and DRS Workstation
Ledgers	
	Accounts Payable set up
	Automatic payments to bank (BACS)

Table 6 – Project 5 Functions

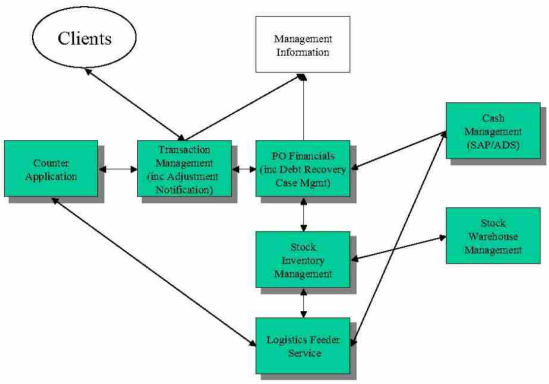
3.2.5.6.2 New or enhanced Interfaces between systems

The evolving interface to the Financial System is described in section 3.3.1.

3.2.6 Project 6 - Improved Cash / Stock Management

For the Stock Management function, the identified business priorities are to reduce operational costs in the Transaction Stock and Value Stock operations, whilst maintaining existing availability levels.

This project will provide the ability for the Branch to check Cash / Stock Orders (as notified through Planned Orders) and to adjust the orders and



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place emergency orders electronically through the Horizon counter.

This project will address the following business requirements, drivers and issues:

- Reduced cost
- Centrally managed stock transport orders.
- POL liabilities for losses.
- Reduced operation charges in warehouse
- Reduced cost for transportation
- Stock availability
  - 99% availability for Royal Mail products
  - 98% availability for other value products (fishing licenses, local authority schemes)

The following capabilities could also be provided as part of this project if further analysis yields a positive business case:

- Provide Delivery Notes and automatic Remitting-In of Value Stock (as described in section 3.2.3 for Cash)
- Posting details of Stock Movements to the Stock Management System

Although not included in the costs for this project, these features would additionally improve the situation around the following business identified issues:

- POL liabilities for losses.
- Derived sales figures (CBDB) currently used for MI and settlement
- Lack of single, consolidated view of stock.

Section 8.3 indicates the possible solution and its costs for a Stock Management system.

3.2.6.1 Outline Solution Design

This project is targeted at allowing branches to place their cash / stock orders electronically through Horizon. It is assumed that Advice Notes (currently used to request that cash / stock be returned) will continue to operate as at present. If any changes are required to Advice Note handling (and in particular allowing an Advice Note to generate a Remit-Out), then these are outside of the current scope.

The following evolution of the Horizon solution is anticipated:

- The Planned Order, passed from SAP ADS to LFS will be structured so that it is possible to identify the individual items in the Planned Order.
- LFS and the Planned Order Loader agent will be updated to reflect the structure in the Planned Order sent to the counter

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- The Counter Application that displays and prints Planned Orders will be enhanced to reflect the structure. It will also provide an "Edit Mode" that allows a Planned Order to be modified and an Updated Planned Order to be returned to LFS. In addition it will support the ability to add additional items to a Planned Order or to create an Emergency Order from scratch. In all cases Reference Data will be required to define what items can be ordered in the proposed manner.
- The LFS Harvester and Host will be enhanced to pass Updated Planned Orders and Emergency Orders back to SAP ADS. It is assumed that these are posted onto SAP ADS as part of the existing feeds that carry Delivery / Collection information periodically during the day.

In addition the Automatic Remitting-In of Cash (described in section 3.2.3) is extended to automatically remit in Stock pouches, assuming that SAP ADS can provide a Delivery Notice with the relevant information, mapping the Stock Items to Products.

If required the Stock management could be implemented on SAP and integrated with the Financial System. At this stage the requirements for this are not known, however an indicative price is included in section 8.3. Note that this would be a separate (new) project.

3.2.6.2 Sizing and scalability

Planned Orders are expected twice per week for Cash and once per fortnight for Value Stock. Currently there are no Planned Orders for Transaction Stock. Assuming that the Emergency Order mechanism will be used for Transaction Stock, with one order per fortnight, this will generate no more than 10,000 orders per day.

3.2.6.3 Security Approach

No changes to Horizon security envisaged within this project.

3.2.6.4 Resilience requirements

No new Resilience requirements need to be met - overnight delivery of order messages is anticipated as the norm.

3.2.6.5 Operational requirements

No special Operational Requirements.

3.2.6.6 Expected Deliverables

3.2.6.6.1 New or Enhanced Functions

Component	Description
Host	
	Enhanced structure for Planned Orders Transmit Amended / Emergency Planned Orders to SAP ADS
Agent	

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Component	Description
	Load Enhanced Planned Order
	Harvest Amended / Emergency Planned Orders
Counter	
	Provide enhanced dialogue to view Planned Order
	Provide Planned Order Amendment Dialogue
	Provide Emergency Order Dialogue
	Support Auto Remit-In of Stock

Table 7 – Project 6 Functions

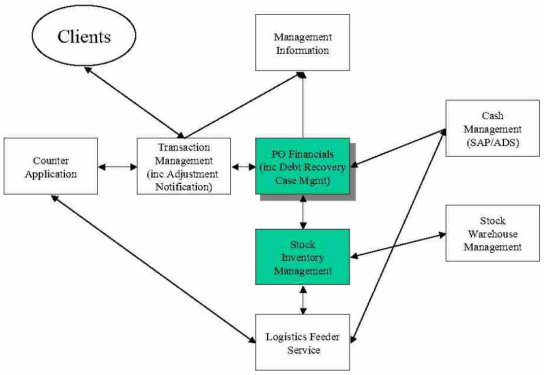
3.2.6.6.2 New or enhanced Interfaces between systems

Additional data flows will be defined and will be carried across the existing systems interface from Horizon to SAP ADS.

3.2.7 Project 7 - Automated Ledgering for Stock

This is the equivalent of the changes described in section 3.2.2, but to handle Stock Movements rather than Cash.

This project, in conjunction with the previous projects, supports the fulfilment of the requirement from the "Accounting, Reconciliation and Settlement (including Debt Recovery and Branch Control)" area of the business to "enable proper accounting of cash and stock", for stock.



3.2.7.1 Outline Solution Design

This project will enhance SAP ADS and enable the Financials System to utilise the SAP ADS information feed. The SAP 'Light' solution for financials is assumed and hence that the stock balances will not be transferred into the POL Ledgers by product, but only for total value. This would change were it decided to account for Stock in the SAP Financial System. The assumption is that SAP ADS will conform to the same input file format for the Financial System as that defined in section 3.2.1 and hence that no further developments are required.

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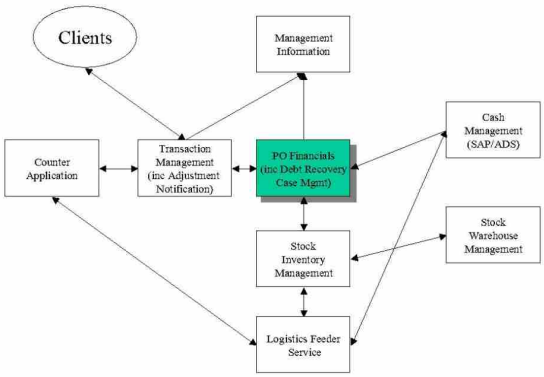
3.2.8 Project 8 - Personal Agents Ledgers

This project is the final step in implementing the new Financial System. Once completed, all the current back-end systems' processing can be transferred to the new system and the old systems can be decommissioned.



There are a number of existing systems that currently rely on CBDB for their data. Mostly, these will be switched off; with perhaps few being changed to obtain their data from the Transaction Management system before the decommissioning of CBDB takes place. It is important to note that the implementation of the new Financial System will deliver a range of important soft (i.e. financially un-quantified) benefits, in particular providing increased robustness to Post Offices accounts.

Additionally, this project delivers the Personal Agents ledger, which builds on the Branch Ledger, grouping information for multiple branches owned/managed by common agents. The interface from ES-FS for the debt recovery items processed directly into ES-FS, will be implemented in this project, to give a total liability view in the POL Ledgers.

Dependent on the cost/benefit assessments of doing so, the project may additionally provide collection of expenditure items allocated to branches, which is currently done in ES-FS. This may be achieved by transfer of data from ES-FS or by moving the process of collecting order processing and cost accounts to operate on the Post Office Financial System. The option to account for expenditure by branch within the new Financial System is not costed within this document.

3.2.8.1 Outline Solution Design

The current assumption is that this project will involve, only, a limited set of changes to the Financial System, and provision of one additional interface. Decommissioning costs of POL Systems (OpTIP and CBDB) are not fully known, further analysis may be required in this area, although Post Office probably already has sufficient understanding of the costs for the purposes of the Feasibility Study.

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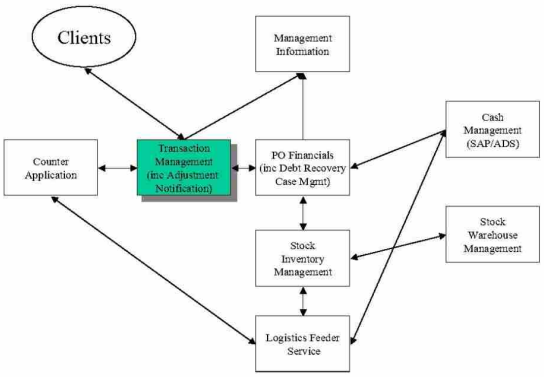
3.2.9 Project 9 - Simplified & Improved Transaction Processing

This project is designed to simplify the internal processing within the Transaction Management area. In particular, in the context of the new simpler business processes and flow, which will have been established by this time, there will be opportunities to reduce internal reconciliation and automate more of the exception processing.



3.2.9.1 Outline Solution Design

The functionality of APS, TPS and DRS, which would have been enhanced in earlier projects, will be rationalised and duplicate functions will be eliminated.

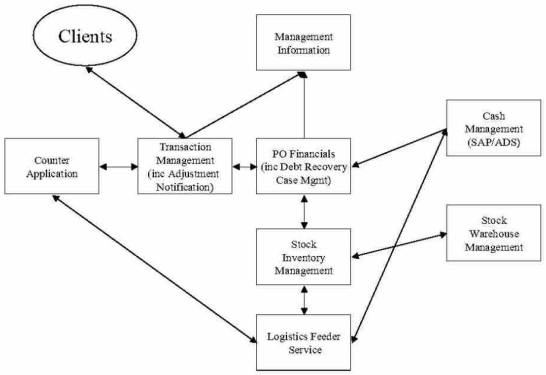
Specifically:

- TPS will be decommissioned
- Cash Account data will be removed from RDMC / RDDS and Counters

3.2.10 Project 10 - Reference Data Improvements

Within the area of Reference Data management the key business priorities have been specified as:

- To ensure consistency in reference data usage within Post Office and Fujitsu Services domains
- To simplify the current processes
- To allow changes, such as organisational changes, to be implemented in a more timely fashion



Leading to the requirements:

- To support data driven change within the business
- To reduce costs of operation

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- To remove inconsistent reference data usage within the organisation
- To effect a vastly improved speed to market for new capabilities
- To implement an automated end-to-end process to capture reference data changes, to minimise delays and errors.
- To centralise the many locally held reference data sources

To address these requirements a number of specific improvements were identified which will deliver the needed benefits. The steps taken to manage Reference Data need to be implemented as a joined-up process and supported by improved tooling, particularly to assist with automation of Reference Data checking and faster flow of information from capture to its deployment.

Therefore, this project covers the re-engineering of the Post Office Reference Data Systems and the processes to support the input and validation of data to the systems.

Reference Data requirements, which are specific to individual projects, will be addressed as parts of each of those projects, and allowances have been made within the individual project cost estimates.

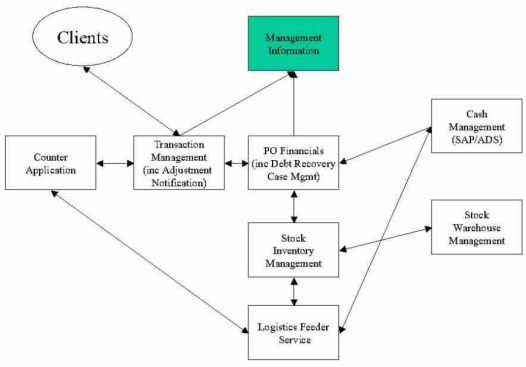
3.2.10.1 Outline Solution Design

It is assumed that any residual Reference Data System needs, over and above those required by Fujitsu Services projects within this paper, will be provided within the domains of the other systems requiring the Reference Data (e.g. SAP ADS). It may be beneficial to redevelop the Post Office RDS system, and the WRDS initiative may be the best starting point for such a development. Fujitsu Services lacks, at present, sufficient information to support a construction of a proposition and hence to estimate associated costs.

3.2.11 Project 12 - Management Information (local/central)

The business priorities for Management Information have been identified as:

- Having systems which enable the quick production of MI to serve flexible organisation structures
- Generating a commercially based culture in the retail line via profit and loss visibility
- Improving the timeliness of information



Other projects identified earlier within this paper will provide much management-relevant data, in particular financial information, in a timely manner for it to be useful. It is recognised that a number of

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further requirements for management information exist, and the Sales MI system is considered an appropriate starting point for evolving a sophisticated MIS to address these requirements. The flow of transactional data from the Transaction Management system can provide a wealth of raw data from which management information can be derived, especially if this is enriched by suitable additional feeds (e.g. market data, sales targets, expenditure information from financials, etc). While Fujitsu Services has proposed, but not costed, the moving of the operation of the Sales MIS service into the Fujitsu Services domain, no account has been taken of the potential costs of future developments.

Although further analysis is required to establish a more comprehensive view of the requirements, the following types of reports are expected to be delivered from the MIS:

- Basket Analysis and Incentivisation effects
- Profit & Loss projections for Branches and/or products

3.2.11.1 Outline Solution Design

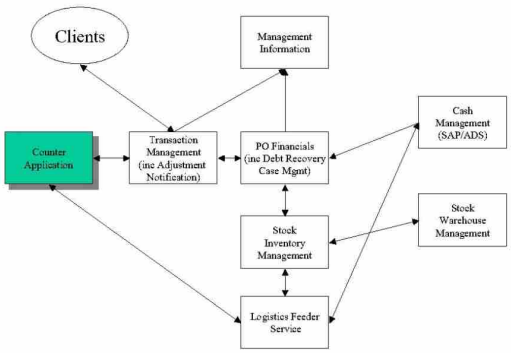
Fujitsu Services recognises that management information needs evolve as the business gains understanding of its performance and seeks further information to maintain business improvement. Such evolution is difficult to predict and it can fundamentally alter the needs for data and processing capacity.

Some of the MI needs of Branches could be met by local processing, rather than by centralised MIS. A demonstration of the possible approach was developed and given to Post Office, and Fujitsu Services will welcome further discussion about this approach to satisfying at least some of the local management information needs. The advantages of the local approach include exploitation of local processing capacity, which could reduce the scale of the central system, and immediacy/availability of relevant local information to Branch Managers. The local approach may also reduce report distribution costs.

3.2.12 Project 13 - Cross Selling

In reviewing the Sales area of the business the following business requirements were identified:

- Developing & maintaining product delivery processes which ensure value is delivered to clients who will thus wish to retain Post Office as their channel
- Opening new markets and developing new product offerings with new and existing clients to bridge the earnings gap created by the loss of some existing products



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- Improving the contribution to earnings by reducing costs of delivering and administering existing products
- Having an IT capability that supports a wide range of customer propositions
- Having exit strategies for non profitable products
- Designing non conformance out of the service

Many of the projects within this paper support these requirements. This project is designed to provide facilities to counter staff, which will enable/ encourage them to actively cross-sell products.

Through this project, a facility will be provided at the counter, where an attribute associated with a product in Reference Data can trigger a prompt to the clerk suggesting a cross-selling opportunity.

The prompt and the trigger will be added into the Reference Data model and passed through from the Reference Data Systems to the Horizon Desktop. The counter software will be enhanced to detect the trigger and display the appropriate prompt.

It is assumed that any cross-selling prompts will be common to all outlets where a product is sold. It is also assumed that this project delivers a solution that does not require customer identity and preferences to be know. A more comprehensive solution based on principles of Customer Relationship Management can be proposed, but that is seen outside the current E2E re-architecting scope. Fujitsu Services would be very happy to discuss this further with the "New Opportunities" team. The E2E architecture does not preclude the introduction of sophisticated CRM capabilities.

3.2.12.1 Outline Solution Design

The paper here is:

- That the Product Reference Data model be enhanced such that for each product a list of potential "cross-sell" products can be specified
- The RDMC will propagate such data to the counter
- The counter will check for any cross-sell links during any sale and if present will present the clerk with a cross-sell dialogue at the end of the "triggering transaction"
- For costing purposes, the "cross-sell dialogue" is assumed to be represented textually, however consideration will be given to presenting an interactive link to displays such as pick lists

3.2.12.2 Sizing and scalability

Further analysis is required to ascertain the volumes of links between products that may be desired. Here in it is assumed that "cross-selling" reference data will be held separately from the main reference data and connected by links.

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3.2.12.3 Security Approach

No particular security implications have been identified.

3.2.12.4 Resilience requirements

No special resilience implications have been identified.

3.2.12.5 Operational requirements

No specific requirements have been identified that would require extension to existing Horizon provisions. Once the functionality is available at the counter, the provision of such prompts will be handled by the normal OBC mechanism.

3.2.12.6 Expected Deliverables

3.2.12.6.1 New or Enhanced Functions

Component	Description
Host	
	Ref Data Support for enhanced Products
Counter	
	Detect Cross -Sell trigger and launch Cross-Sell dialogue

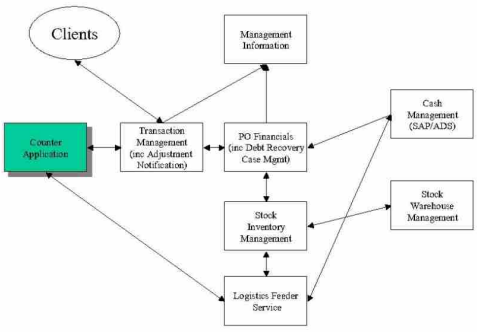
Table 8 – Project 12 Functions

3.2.12.6.2 New or enhanced Interfaces between systems

The Product Reference Data flow from RDS to RDMC will be enhanced to support this additional flow.

3.2.13 Project 14 - HTML Help

As described in the previous project (see Section 3.2.12) the Sales area of the business identified requirements around increasing sales, reducing costs of delivering and administering products and improving conformance of sales processes. It is recognised that further support to the clerk, provided through the counter system, would address these requirements.



The introduction of Mails has provided the ability to extend the amount of Help available with a button on the Horizon Desktop. Through this project the underlying technology will be exploited further. Other desktop buttons will be provided, so if there are particular activities within which extended help is appropriate for the clerks, this feature can be exploited.

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3.2.13.1 Outline Solution Design

The implementation of Mails has introduced the standard Web Riposte facility of Extended Help to the counter. The Help facility is provided by a set of HTML pages, which can be associated with any Desktop Button. This extended help capability can be exploited with any other aspects of the system that POL consider would be of benefit. The following developments are envisaged:

- The solution is assumed to exploit the Web Riposte mechanisms for "Effective dates" (achieving effects similar to Temporal Objects). A development of generic HTML Help loader will be carried out to support direct loading of Help Data into Correspondence Servers.
- Further analysis will be carried out to define Authoring and Authorising processes to be used in conjunction with this facility. These processes will be co-ordinated with the current Type C Reference Data processes. It is assumed that (Type B) direct feed of Help texts from Post Office will be utilised.

3.2.13.2 Sizing and scalability

Experience with the Mails Help information has shown that there are potential problems in distributing large numbers of changes in a single "chunk". To avoid such problems, a mechanism will need to be put in place to divide Help Text into manageable chunks for distribution and utilise the "Effective Dates" feature of Web Riposte to co-ordinate the activation of changes.

Help Text will be distributed using WebRiposte Subscription Groups facility. It is assumed that the rate of change in help text will not be excessive and hence that the existing Horizon distribution mechanisms will suffice without imposing undue overheads on the network.

3.2.13.3 Security Approach

No additional security implications have been identified.

3.2.13.4 Resilience requirements

No additional resilience implications have been identified.

3.2.13.5 Operational requirements

No specific requirements. Once the functionality is available at the counter, the provision of Help Text will be handled by the normal OBC mechanism. It is assumed that the frequency of change will not exceed the thresholds defined for the OBC service in the Horizon Agreement.

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3.2.13.6 Expected Deliverables

3.2.13.6.1 New or Enhanced Functions

Component	Description
Agent	HTML Help Loader
Host	Possible support through RDMC

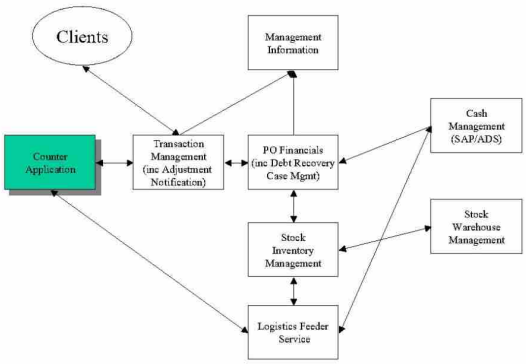
Table 9 – Project 14 Functions

3.2.13.6.2 New or enhanced Interfaces between systems

The RDS (or its replacement) to RDMC interface will be enhanced to support the management of Help Text.

3.2.14 Project 15 - Printing of Virtual Stock

It is recognised that the business priority, for the Stock Management function, is to reduce operational costs in the Transaction Stock and Value Stock operations whilst maintaining existing availability levels.



Many of the business requirements for this area of the business are addressed through projects described above (see Sections 3.2.6 and 3.2.7). One possible way of further reducing the costs of Stock Management is to print the stock locally (i.e. adopt the notion of "Virtual Stock"). However there are a number of potential challenges to be overcome to achieve a cost justified initiative. In particular:

- The existing counter printer is relatively slow and of low print quality. It is unlikely to provide sufficient quality for printing of secure stock
- There are security implications in printing value stock, since if the outlet can print it, then so could the customers on home PCs
- Printing forms on the back-office A4 printer may be a feasible option, however the back-office is sometimes remote from the counter and the printer is shared by all counters (there is only one back-office printer per branch, even in the largest branch). Further analysis is required to segment the Branches, consider the realisable benefits and set those against the costs of appropriate printing facilities

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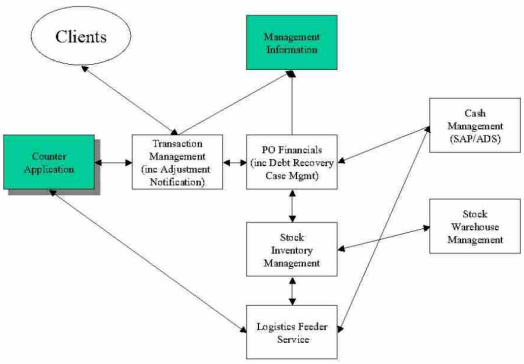
3.2.14.1 Outline Solution Design

Until further analysis is concluded, it is not possible to present a meaningful proposition that could be adjudged beneficial.

3.2.15 Project 16 - Local Destruction of Stock

Currently, all unused value stock is returned for central destruction. It is recognised that the business driver for the Stock Management function, is to reduce operational costs in the Transaction Stock and Value Stock operations. This project has been designed to further reduce these costs by implementing system controls to support the reduced reliance on central stock destruction process and to enable at least partial local destruction of Value Stock. The feasibility of the project will be dependent on the view taken by Post Office on risks and liabilities associated with making such a facility available to Branches.



It is proposed that this project introduces a counter transaction to record that value stock had been destroyed locally. This capability will be supplemented by central monitoring, based on reports constructed within the MIS.

3.2.15.1 Outline Solution Design

The paper within this project is that a new button will be provided on the counter, which enables a "Remit-out to bin". Any security / authorisation is assumed to be handled by business processes and checks within the Financial and MI systems.

3.2.15.2 Sizing and scalability

No implications.

3.2.15.3 Security Approach

The provision of the facility will need to be accompanied by an audit process, using reports from the Financial and MI Systems.

3.2.15.4 Resilience requirements

No specific requirements have been identified.

3.2.15.5 Operational requirements

No specific requirements have been identified.

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3.2.15.6 Expected Deliverables

3.2.15.6.1 New or Enhanced Functions

Component	Description
Counter	Support for new "Remit-Out to bin" function
MIS	Local Stock Destruction Reports

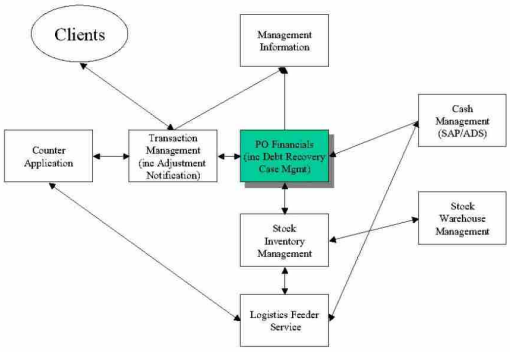
Table 10 – Project 16 Functions

3.2.15.6.2 New or enhanced Interfaces between systems

None.

3.2.16 Project 17 - Debt Recovery Case Management

This project has been designed to further address the business priorities and requirements around Debt Recovery. These requirements have been partially addressed within projects above (see Sections 3.2.4 & 3.2.5). This project will provide mechanisms to support Case Management within Debt Recovery.

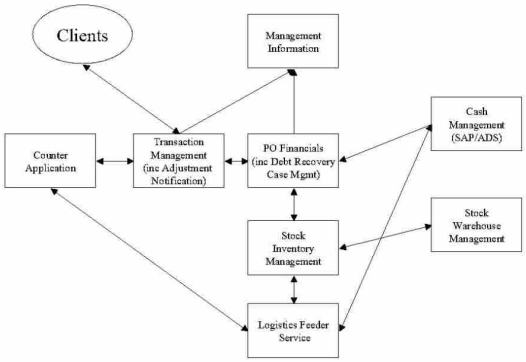


3.2.16.1 Outline Solution Design

With only skeletal requirements available from the initial analysis it is assumed that the Customer Service Management (CSM) functionality in SAP will be sufficient to satisfy the case tracking requirements. The proposed facility is aimed at providing a system to monitor debt recovery cases and to provide a repository of information to track the status of each case.

3.2.17 Project 18 - Ref Data Process Improvements

This project aims to deliver a process improvement by achieving a closer inter-working between the currently separate teams within Post Office and Fujitsu Services, which manage the Reference Data within their separate domains. The paper is to create a single team environment, thus reducing



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overlap in the Reference Data verification processes and speeding up the propagation of reference data changes from creators to the ultimate consuming systems.

3.2.17.1 Outline Solution Design

This project is a business process change and may not require any additional systems support. A merger between the Post Office Ref Data systems and the FS RDT rig will be assessed as part of this project.

3.3 Overall Solution Considerations across Projects

3.3.1 Financial System Overview

The Financial System, which will be implemented, will be a SAP system, including the following modules: FI-GL (General Ledger), FI-AR (Accounts Receivable), FI-AP (Accounts Payable), CO-PCA (Profit Centre Accounting, CO-CCA (Cost Centre Accounting). This is described as the 'Light' option as it does not hold product level information.

The objective is to minimise duplication of data and produce financials based on a single data source. The recommended architecture involves the integration of the Horizon EPOSS solution with an SAP R/3 back end financial solution and with MI, the latter meeting the management information requirements needed to manage the business. (It should be noted that for management information, an option of utilising the SAP/BW module is presented in Section 7, however, further study of BW viability to support the required data volumes is required, and hence the MI based solution is the one assumed at this stage).

The advantage of the proposed architecture is that management reporting is based on information, which is closely linked to financials, but the volumes and processing of data will not affect the utilisation of the Financial System. The 'reporting engine' will be a separate entity from that supporting the financials.

Rationale behind the model:

- The assumption is that there is no reason to fundamentally change the present separate system designs in the Cash and Stock Management (SAP ADS) area (however there are detailed changes required to the SAP ADS functionality as described in various projects). The front-end systems will not fundamentally change and will feed the necessary information into the SAP financials and into MI or BW.
- The Branch reporting on a daily or ad hoc basis will be produced from the system within the Branch. This will provide daily operational activity in order for the Branch to be able to manage their business. The branch ledger will be recorded in the SAP Financial System to get an overall view of the Branch position.
- There will be a transition to an end state, which will involve a change in source of some of the management information and also the reference data requirements. These are seen to evolve during the course of the implementation.

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- The creation of branches as individual profit centres and the use of MIS or optionally of SAP's Business Warehouse are integral to the design. The presumption is that the Sales MI system will be enhanced to provide whole office views for individual branches, and integrated views of multiple branches. Alternately, Profit Centre Accounting (CO-PCA) could be implemented in BW but there are concerns about sizing/capacity. Further analysis is required in this area. See Section 7 for the optional SAP BW proposition.

The key elements of the new model:

- The single source of data from Horizon will produce reconcilable summaries, via Transaction Management, back to the transaction data before posting to the financials.
- Transaction 'drill down' will take place in the Transaction Management system (subject to the constraints described elsewhere), as the information in the financials will be at a summary level.
- BW/MI will be the source of management accounting information based on a summarised data stream from Horizon and the Transaction Management system.
- The inventory volumes used for risk management will need to come from a separate 'stock management' system, as the financials will not hold the balances for stock at item level.
- SAP accounting model:
  - Branches will be set up as:
    - Profit centres in order to account for individual branch activity in total
    - Cost centres as in ES-FS, for cost assignment. This will be in line with the ES-FS model in order to facilitate integration
  - The Agents will be set up as:
    - Customer accounts to account for debts outstanding and for logging of debt collection items identified through discrepancy correction notification.
  - Clients will be set up as:
    - Vendors to give an open item ledger against which to pay clients and also to monitor total Post Office liability.

The system will be hosted on a dedicated Open Systems server running under the Solaris operating system. Data storage will be on EMC disk arrays.

The normal way for managing change for SAP is to have a set of three interconnected servers:

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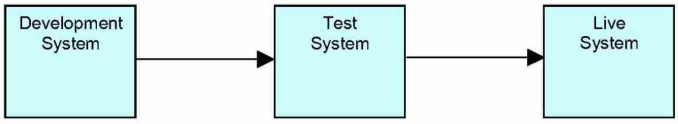

Figure 6 – SAP Deployment

Any changes are passed through from the Development System, through to the Test System and then onto the Live System in a controlled manner.

The SAP system supports a number of interfaces:

- Bulk Interface to / from other Systems

These interfaces are provided by means of reading / writing files in well known "interface directories". The format of such files will be defined as part of the design process, however the format is expected to be XML.

- Interface to external SAP Systems

SAP provides a mechanism for exporting / importing information directly to / from external SAP systems.

- Interactive Interface to support users

SAP provides a Client application that can be deployed on users' PCs that supports access to those SAP functions to which that user is entitled.

- Support /Management Interfaces

All changes made to the SAP system are fully audited.

Financial Data (including the audit data) is held within the Financial System for 3 months after which it is archived off to the Archive System. It should be noted that archived documents can be viewed and printed, but not amended, and this enables on-going viewing of these documents even though they have been archived.

3.3.1.1 Interfaces to/from the Financial System

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Project	Interface	Comments
1	Transaction Management to Finance	Cash & cheque transactions only • Daily summaries created and posted to the ledgers • Specification of the interface to be established NB Cheques out of branch to EDS built into interface Discrepancy transactions picked up at this point although not delivered to SAP ledgers until later project
2	SAPADS to FI/CO	Extend interface from project 1 with SAP ADS as the source (like a branch)
2	Bank to FI	Receive bank statement to ledger • Assume one bank account NB The bank statements need to be processed in both the new and legacy systems
2	Assumptions:	EDS processing & onward cheque management needs further investigation, but can be automated if required. Interface uses same method as in project 1 i.e. via Transaction Management Data migration – assume opening balances are declared cash to the nearest date to migration and the balance is then derived from the further transactions to the close date.
4	Error handling from branch declarations	Inbound handling of errors generated by branch declarations identified by discrepancies between derived and declared positions (cash and stock)
4	Outbound error notification	Outbound error notification for adjustment to Horizon transaction flow. Further analysis is needed to determine whether workflow is required or not
4	Assumption	Rota checks - identified errors generated from MI will be processed manually into financials
5	Inbound Client transactions	Inbound accounts payable transactions to create the client ledger documents
5	Inbound Client settlement details	For client settlements made on client data where there is an automatic and validated data stream. This interface will create the posting of cash in accounts payable and generate a payment run to BACS. The transactions will need enough data to be able to perform an automatic matching with ledgered items. The functionality will need to be confirmed.

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Project	Interface	Comments
5	Outbound BACS payment file	Standard SAP functionality to produce the outbound BACS payment to the bank (assume one bank).
5	Finance to ES-FS	Interface to transfer all ledgered items to ES-FS automatically (currently manual)
5	Assumptions	Data migration assumed to be year end close balances at 31/3 – details to be confirmed with POL
7	'Stock Ledger' to FI	Interface of stock movements (not by product) to the stock accounts in POL Ledgers
7	Assumption	The information source is SAP ADS or equivalent stock management system
8	Wash up items	Branch debt items which are processed in ES-FS should be interfaced to the POL Branch Ledgers to give a full Branch liability view. Care should be taken in the book-keeping for these items to ensure that they are not duplicated when the interface to ES-FS in project 5 is run. Other items that have not yet been identified in terms of current CBDB interface requirements. These are not known.
8	Assumption	All purchasing is processed to the ledgers through ES-FS as current and the complete POL ledgers can only be seen in ES-FS.

Table 11 – Outline Financial System Interfaces

3.3.1.2 Reference Data Considerations

Items to consider	Comments
Branch existence and maintenance	Effective dates
Branch hierarchies (type – managed or agency)	Effective dates
Chart of Accounts	
Client accounts (Accounts payable master data)	Effective dates
Product information and product hierarchy (SAP heavy option only)	Effective dates
Client to Product mapping (not in SAP 'Light')	
Terms of payment	

Table 12 – Reference Data for Financial System

3.3.2 Approach to Satisfying Non-Functional Requirements

3.3.2.1 Auditing and Archiving

It is assumed that the current Audit and Archive policy will be retained, namely:

- Any data passed to an external system will be audited

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- Data for which subsequent audit access is needed will be archived when immediate access is no longer required

In particular, this means that data passed between systems within the Horizon Domain will not be audited.

3.3.2.2 Deployment

The new Financial System will be deployed on Open Systems Solaris Platforms in the existing Fujitsu Services Data Centres. Data storage will be on EMC disk arrays.

The MI System will be moved into the existing Fujitsu Services Data Centres, thus eliminating the need to transport the all Transaction details outside the Data Centre.

3.3.2.3 Systems Management

System management is the provision of the services enumerated below to any platform in an integrated remotely managed solution that is sympathetic to any special needs of the infrastructure (for example scalability, lights-out operation, security threats) and also minimises direct personnel costs. The following are included:

- a managed framework
- software distribution
- distributed monitoring
- event management
- time synchronisation
- user management
- third line support service

The E2E re-architecting projects require the main solution components to be managed under the system management scope definition, which is assumed as:

- Transaction Management System
  - one or more Oracle applications
  - executing on the Solaris operating system
  - on Open Systems hardware
  - physically situated in the Horizon Data Centre
- Financials System
  - a SAP based application with backend data base (Oracle)
  - executing on the Solaris operating system
  - on Open Systems hardware
  - physically situated in the Horizon Data Centre

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The new solutions will be bought under the existing enterprise wide management solution that services the Horizon Data Centre and Post Office counter estate. The design maximises re-use of the existing investment in software, people and process.

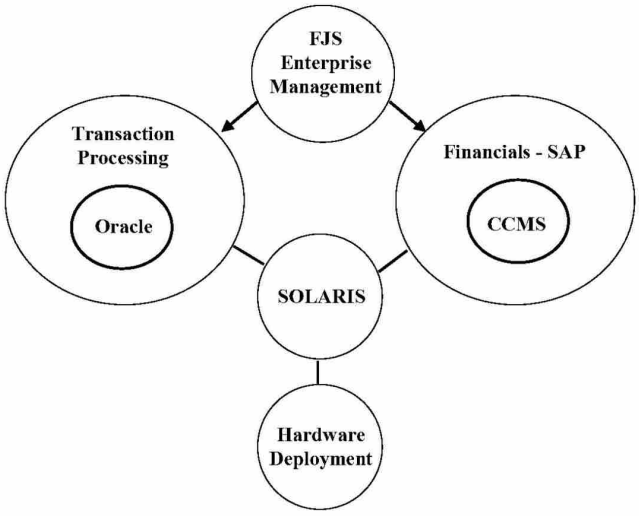

Figure 7 – Systems Management Architecture

Figure 7 shows the re-use potential from the existing Horizon solution in:

- Open Systems components
- Oracle database products
- Fujitsu Services Enterprise management

Once the full requirements for the E2E are analysed, the existing management facilities will be reviewed to determine whether their functionality needs to be enhanced to satisfy all the attributes of the Transaction Management and Financials Systems.

The new platform for financials is SAP R/3. SAP, as an application environment, is supplied with built-in component for system management, called Computing Centre Management System (CCMS).

Each required system management service at the enterprise management level will be carried through to the SAP environment directly using CCMS components or configuring (appropriate to the SAP environment) and invoking existing Horizon Solaris management agents to give the most cost effective and pro-active end to end solution.

The service design will cover at least:

- Derivation of product components for each service at each level (hardware, OS, application)

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- Configuration of product component to match operational, security requirements and host characteristics
- Integration where appropriate into the existing Horizon bespoke management layer
- Test on rigs representative of final solution
- Upgrade of operational process and procedures

The main work will be in incorporating the SAP systems. Existing Host support will also be extended within this program.

3.3.2.4 Resilience

Our understanding is that the current Transaction Processing and Financial Systems (OPTIP and CBDB) have a 48 hour recovery requirement met by a 3rd party DR contract.

However, current Horizon systems have full resilience with the ability of a standby host at the other data centre being able to take over the work of a failed host within about 4 hours. This is supported by the use of Mirrored EMC disks across the two sites, with tape backups being taken automatically using BCVs to reduce the system downtime.

Given the low cost of disk storage, it is proposed that this mechanism is also employed for the new Transaction Management and Financial Systems.

3.3.2.5 Testing

Each element of the new solution will be tested independently based on their interface specifications. Testing up to the service boundary between Fujitsu Services and Post Office domain is assumed on the basis of DIT testing at the boundary. If further end to end testing is required, this will need to be specified and costed.

3.3.2.6 User Administration / Access

There will be a large number of users for the Financial System (up to 400) who will all need to be managed. In particular, these users will be resident outside the confines of the existing Horizon Data Centres and so will need to have their access into the Data Centre securely managed.

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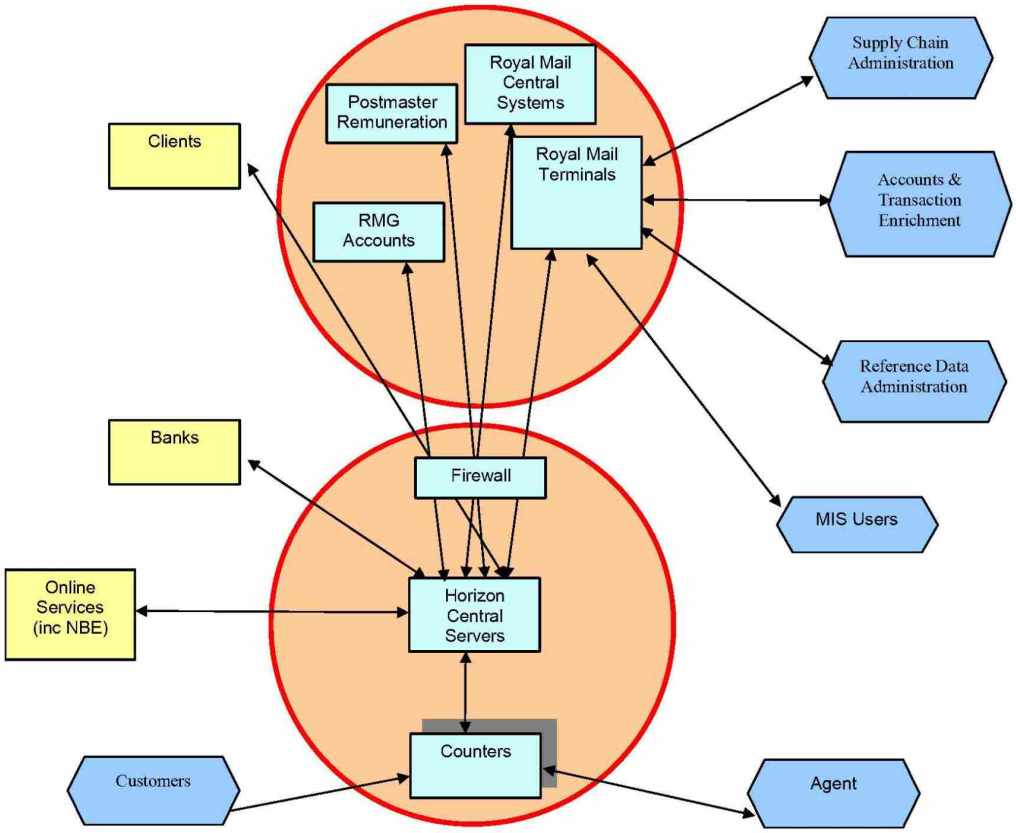

Figure 8 – Post Office Interconnection

The assumed responsibility for managing the users is split between Fujitsu Services and Post Office as follows:

- Fujitsu Services Responsibility
  - Manage Central Systems
  - Create Power Users within Accounting and Transaction Management that will be capable of creating end users within these systems.
  - Manage Communications between Horizon Data Centre and Post Office Network
- Post Office Responsibility
  - Manage User Terminals and Environment
  - Inform Horizon of new / deleted Users and their Roles within those managed by Fujitsu Services

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- Create end users within the Transaction Management and Accounting and manage the assignment of these users to the roles provided by the system for business users

3.3.2.7 Security

To ensure that end users accessing the new back end systems from within the Post Office Domain do not have access to the secure Horizon environment, the application servers for these systems will be placed in a separate protection domain with limited access into the main Horizon protection domain.

3.3.2.8 Training

It is assumed that training will be provided by Post Office.

No specific Training Facilities are to be provided by Fujitsu Services.

4 Migration Activities

The delivery of the End-to-End re-architecting programme will comprise many activities. The following subsections define the key activity areas and propose effective approaches for their delivery.

4.1 Migration Principles

The Post Office businesses identified and quantified a number of key business benefits during the course of the Requirements Capture activities conducted as part of the End-to-End Feasibility Study. Subsequent analysis identified a number of potential projects that would individually deliver to the Post Office the capability to realise these target benefits. Working with the Post Office project team, the projects profiles were further refined and a potential delivery schedule identified, taking into account the inter-dependencies between projects and legacy systems that are to be replaced. The resulting programme is described in this paper. It has been specifically designed to provide Post Office with a phased introduction of benefits, structured to balance business needs with investment constraints that require both an early return on investment and a modest cash flow exposure.

The adoption of natural service boundaries enables a simpler testing regime to be taken. Reconciliation activities are now focussed on the external boundaries to Post Office businesses, removing the requirement to support reconciliation across contracting boundaries that are internal to Post Office.

The resulting programme schedule is presented below in the context of the existing Horizon release schedule, as requested by the Post Office project team. It has been assumed that the back-end components of the solution proposed by Fujitsu Services can be developed independently of the Horizon Counter Release Schedule. Therefore it is expected that there will be opportunities to further refine the programme scheduling.

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4.2 Project Dependencies

Interdependencies between the projects in the proposed set are shown in the chart below (Figure 9). The design of the proposed release phasing has taken these interdependencies into account.

The remaining projects, which are not subject to these dependencies, can be implemented independently, namely:

- Reference Data improvements
- MIS - Basket Analysis
- Cross-selling prompts
- HTML Help
- Printing of Virtual Stock
- Local Destruction of Stock

These remaining projects, for which interdependencies do not exist, have been positioned within the proposed release schedule according to the current understanding of the business requirement and the implied development implications.

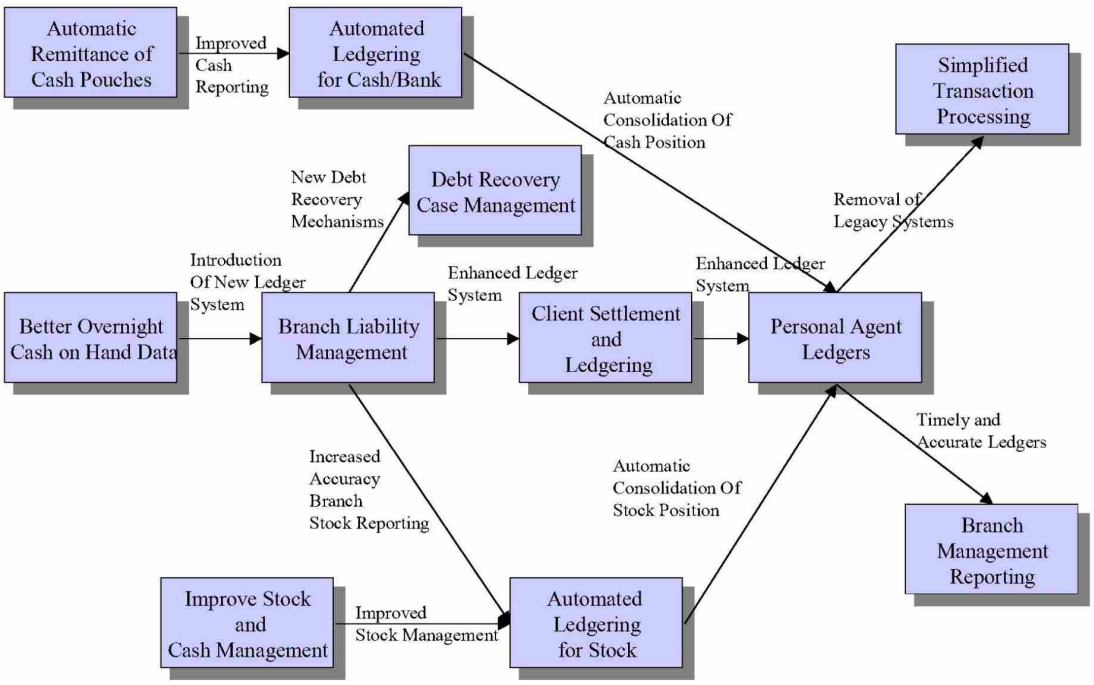

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Figure 9 – Project dependencies

4.3 Migration Phasing

Taking into account the principles and project dependencies detailed above, Fujitsu Services propose the following phasing of the project activities:

1. Business Process Analysis and Design (see section 4.4)
2. Horizon Release S60

   Containing

   - E2E Release 1 - Creation of cash/bank ledgers reporting cash/near cash positions at branches and cash centres based on new Post Office Financial system
   - Sales MI system feeds replacing TPS to OpTIP feed
   - Exploitation of HTML help at the branch

   Note: Although it is not viewed as being a release dependent project, it is envisaged that Reference Data Process Changes to remove duplication of data entry and verification across Post Office and Fujitsu Services can be completed within the Release 1 timescale to reduce operating costs
3. Horizon Release S80

   Containing

   - E2E Release 2
     - Creation of branch, client and stock ledgers on new Post Office Financial system
     - Creation of Branch Liability Management capability
     - Stock Inventory Management
   - Basket Analysis MI reports (if carried out by Fujitsu Services)
   - Cross-Selling prompts at branch
   - Capability for local destruction of stock at branches
4. Horizon Release S90

   Containing

   - E2E Release 3
     - Finalisation of ledgers on new Post Office Financial system
     - Simplified & Improved Transaction Processing
     - Debt Recovery case handling

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- Branch P&L MI reports (if carried out by Fujitsu Services)
- Capability to print stock at branch (if a viable business case can be made)

Note: The project phasing presented is based on the assumption that Fujitsu Services is the prime contractor for this work and that it is conducted under the Joint Working ISL, as defined in the Agreement, enabling overlapping stages of work during the Requirement Analysis and Solution Specification Stages

4.4 Business Process Analysis and Design

The feasibility study, of which this paper is one of the deliverables, needs to be followed by full analysis of the business and technical requirements in those areas where Post Office agrees to undertake transformation projects:

- Overall business process design – to set the context within which new or enhanced systems will support the business
- Detailed business process and business data definitions – in specific areas where automation and system support will be implemented

It is recognised that, in several areas, new business processes and practices are being introduced and the lack of previous experience of such processes can make the design and analysis task difficult and protracted. Therefore, we propose that Post Office, with assistance from Fujitsu Services analysts, establishes an E2E demonstrator system, using the facilities of the Horizon Architecture Lab, to rapidly prototype key aspects of the solution and thus provide the stakeholders with a visualisation environment to quickly identify the optimal solutions. This paper assumes that this visualisation work will form a significant part of the Requirement Analysis "Start Up" activity detailed in Schedule 12 of the Agreement to enable continuity of work pending the outcome of Post Office review and approval of the Feasibility Study findings.

The Business Process definitions will be documented using the System Architect tool, outputs of which can be shared between Post Office and Fujitsu Services. These models will become a key part of Conceptual Design documents, which will also capture key functional and non-functional requirements for the systems that are to be delivered.

4.5 Design Proposals

To achieve the required timescales, S60 and project 5 will need to be progressed at pace. In particular, the solution design will need to be developed in parallel with requirements. There are also pressures on S80 and dependencies are set out in paragraph 4.8.

4.6 Business Case reviews

It is anticipated that Post Office will review the Design Proposals against the original business cases, to confirm the commercial viability of the proposed solutions. Where a

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business case may not remain strong enough, the design and associated requirements will be jointly reviewed to identify any opportunities for improvements.

4.7 Roadmap Plan

The requirements identified to date are scheduled as transformation projects and shown in the Gantt chart embedded below. Indicative costs contained within this document are based on this timetable. Fujitsu Services has assumed that Post Office will authorise Fujitsu Services work at an uninterrupted pace in order to achieve the proposed schedule.

E2E FS Plan V0.3.xl

4.8 Dependencies on Post Office

The scheduling of the End-to-End Transformation projects detailed in the Roadmap (section 4.7) and the indicative costs detailed in section 5 are based on the following dependencies on Post Office:

- Authorisation for the Requirements Analysis and Design activities, detailed in section 5.2.1, to enable work to start by 31st March 2003, proceeding under joint ISL;
- Active participation of Post Office business domain owners in support of the Requirements Analysis and Design and subsequent Release and Project activities, in particular to enable sufficient requirement detail and solution definition to be produced to enable development work on the End-to-End Release 1 Transformation Projects (section 5.3) to commence by 5th May 2003;
- Authorisation for the End-to-End Release 1 Transformation Projects, detailed in (section 5.3), to enable development work to start by 5th May 2003;
- Authorisation for the End-to-End Release 2 Transformation Projects, detailed in (section 5.4), to enable design work to start by 2nd June 2003 and development activities to commence in early August 2003;
- Authorisation for the End-to-End Release 3 Transformation Projects, detailed in (section 5.5), to enable design work to start by 1st December 2003;
- The Advanced Data Capture aspects of the AP Enhancement requirement are implemented and funded by the Change Programme (i.e. not the End-to-End Transformation Programme) prior to commencement of the implementation stage of Release 2 (section 5.4);

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- The deployment of Mails to the branch network is completed prior to commencement of the Cross Selling Project (section 3.2.12) and HTML Help.

5 Pricing Assumptions for Transformation Projects

The following subsections present the assumptions, which underlie the implementation costs, of the individual End-to-End Transformation Projects and Releases.

5.1 Principal Assumptions

The principal assumptions used in the pricing approach are listed below. Any project specific assumptions that have been made are given within the sections containing individual project costs.

- The project pricing has been estimated based on the release profile detailed in the Road Map shown in section 4.7 above. In particular, it has been assumed that the releases in so far as possible will utilise the standard "pre-paid" SI resources provided for by the Agreement. These cost assumptions will need to be reassessed if the End-to-End and/or Change Plans schedules are varied;
- Post Office users will access the services provided by the End-to-End Projects through existing Post Office PC and network infrastructure. User support and client (i.e. user PC based) software will continue to be procured through existing Post Office channels and the cost estimates do not include provisions for these services;
- The interconnection between Post Office network and Horizon network exists. Its capacity has not been assessed and hence any upgrades, should such be required, are not included;
- Post Office users accessing services delivered by End-to-End Project support enquiries will continue to be handled via existing support channels. The Horizon support service will interface to the Post Office user support service provider to manage service related enquiries relating to services delivered by the End-to-End projects;
- Post Office will be responsible for management of Post Office user access to services delivered by the End-to-End projects. Support for 10 administrative Post Office users will be provided for the purposes of this user management function. User access to individual services will be password protected and restricted to user names registered through the user management function;
- It has been assumed that a solution design can be produced to handle the performance requirements of the End-to-End projects without the need for upgrading the Horizon Correspondence Servers and/or the Horizon data network;
- It has been assumed that the existing links between Horizon and Post Office data centres have sufficient capacity to accommodate the access requirements to the extended Horizon estate, namely: Post Office users, SAP ADS, SAP HR and ES FS;

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- It has been assumed that the switch over to the new Financial System will occur simultaneously across all Horizon branches and that the Cash Account period and cut-over timing will be aligned to minimise service introduction costs. Furthermore, the switch over, together with any implied user interface changes, will be effected by Reference Data;
- It has been assumed that the legacy TPS service will be required to run for a period of 35 days after the cut-over to the new Financial System to accommodate flow-through of Cash Accounts from non-polled branches;
- It has been assumed that OBCS support will not be required by the time accounting switches over to the new financial system implemented by the End-to-End projects. Should OBCS remain, then the OBCS host and agents will continue to be operated and a new report will be produced from the OBCS host to provide Client Settlement information to be loaded into the Financial System equivalent to that being produced from Transaction Management for other clients. No attempt will be made to fully integrate OBCS into Transaction Management. No costs for the continued operation of OBCS or for such developments have been included.
- It has been assumed that the End-to-End projects are implemented without any requirement for branch site visits by Horizon engineers;
- Data relating to client transactions (existing DRS and APS) needs to be retained in the new Transaction Management System for the period during which settlement is finalised. It is understood from discussions with Post Office that this period is a maximum of 56 days from the date of the original counter transaction;
- It is assumed that delivery of client files to a central point (EDG) will not alter the current Horizon OLAs for file delivery times and that these times refer to delivery of the files to the central point;
- No increase in support for litigation investigations has been assumed;
- It has been assumed that there will be no additional service level reports produced;
- It has been assumed that there is not a requirement to audit access to the Management Information service;
- It has been assumed that details relating to Transaction Management service user sessions will be retained for audit purposes. Audit records relating to the transaction data held within the service are already covered by existing audit provisions in the Horizon estate;
- It is assumed that arrangements relating to Post Office access to audit records are as detailed in the existing Agreement;
- The level of support required to cover the migration to the new Financial System and the de-commissioning of interfaces to superseded legacy systems will be re-assessed during the requirements analysis stage of the programme. The cost estimates given do not include any incremental costs beyond that normally provisioned for a system release;

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- For the purpose of these costings, it has been assumed that all additional hardware and SAP licences needed for the Financial system will be assigned by Post Office out of spare capacity or procured by Post Office. Until the specification of the hardware platform is known, it is not possible to provide maintenance and support costs and therefore these are not included in the Fujitsu Services costings. (Should this assumption be incorrect, an indicative price for a hardware provision to support the Financial System is given in Section 8);
- It is assumed that training will be provided by Post Office Ltd.;
- It is assumed that Post Office will provide up to date anti-virus software on all workstations that access systems within the extended Horizon domain;
- It is assumed that no additional effort is required in monitoring firewall events for Post Office users;
- It is assumed that no additional penetration testing is required;
- It is assumed that all systems retain the level of security associated with the systems they replace. In particular it is not assumed that they will necessarily comply with ISO17799;
- It is assumed that Post Office will lead on any End-to-End testing which may be required beyond the Horizon service boundary.

5.1.1 Financial System Assumptions

The development of the new Financial Systems will occur incrementally through several Releases. The following assumptions apply overall to the Financial System Solution.

5.1.1.1 Solution

The following assumptions are made with respect to the design of the Financial System in SAP:

- Standard SAP v4.7 is being used
- SAP licenses will be dealt with by RMG directly and therefore this paper does not include provision for SAP license costs. Examination of existing SAP licenses will determine how many additional licenses may be required to cover the anticipated 400 named users of the new Financial System
- It is assumed that no server licenses are required by the Post Office, however if on-going support is required several Basis licenses will be required and this will be covered by the Post Office
- It is assumed that any on-going maintenance charges relating to additional SAP licenses will be covered by the Post Office, so the costs have not been included in this paper

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- Standard SAP reports will be delivered, any additional reporting will need to be considered in addition to this paper
- Volumes will not be held in SAP FI/CO so the source of the information for SAP HR for Agent's remuneration will come from Transaction Management. Volumes required for inventory risk management are assumed to come from an inventory management system, not from the financial ledgers unless the option to implement Stock Management in SAP is taken.
- Data migration will be limited to opening balances e.g. Cash, Stock and Balance Sheet, assuming 'go-live' takes place over year-end.
- Fujitsu Consulting will utilise off-shore capability for the SAP technical development in order to reduce the implementation costs
- Post Office will supply super-users to the project full time for the duration of the project - probably about 10 people
- The Super-users will be responsible for getting approval before the system goes live in each phase.
- Reference Data interfaces will be addressed during each project
- The costing has been based on projects running parallel over a 23 month period starting in May 2003 in order to maximise the utilisation of the core implementation team
- The project phasing has been timed to aim for a year-end phased go-live, if the timing changes, this may affect the costing because of a heavier data migration requirement.
- If the phasing of the projects is changed the pricing will need to be revisited.
- Product level detail will not flow through to the financial ledgers except where the client ledger depends on a separation, as the product level reporting is assumed to be done from MI.
- Training - End User training and change management will be handled by Post Office.
- Key users who will become members of the implementation should be sent on a generic SAP training to give them an overview of SAP and the terminology used. This training is not included in the current costing.
- Notional branch profitability is currently calculated by the ABC system and the mechanism for this calculation will not be changed

5.1.1.2 Migration

The following assumptions are made with respect to migrating to the new Financial System in SAP:

- Cash account closure - cutover needs to be carefully considered and realignment of period closures should be made and notified to agents prior to final cutover during

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project 8 such that there is a clean start to the new accounting solution. This is especially significant in the discontinuation of the cash accounts and to which period they report in the final instance before cutover.

- Audited account balances should be passed through to the new systems and the auditor should be involved in signing off the opening balances before commencement of the new system. This will facilitate the clean transition to the new environment.
- It is assumed that any data required for the cutover to the new financial system will be readily available and will be provided by the Post Office.

5.2 Business Process Analysis & Programme Management

5.2.1 Business Process Analysis & Design

5.2.1.1 Assumptions

Completion of the overall business process map is necessary before the individual, but linked, transformation projects begin. Only then will a coherent overall context exist within which each project can be implemented.

This activity will be led by Post Office and supported by Fujitsu Services. It will commence immediately after submission of this paper to maintain maximum progress and continuity of the programme.

Detailed analysis of requirements, data structures and business procedures will be carried out within the individual Transformation Projects and hence the costs for these are included within the individual project costs below.

5.2.2 Programme Management

5.2.2.1 Assumptions

In accordance with the Joint Working ISL defined in the Agreement, it has been assumed that Management of the Solution Specification, Solution Build and Test and Implementation Stages of the End-to-End Transformation delivery programme will be a Fujitsu Services responsibility. In addition, management resources will be required to co-ordinate Fujitsu Services work during the Requirements Analysis Stage, Migration Planning and the transition into the individual implementation projects.

The estimates detailed below cover the period April 2003-March 2005 (inclusive) as detailed in the Programme Road Map (section 4.7).

5.3 E2E Release 1 – Projects 1, 2, and 3

E2E Release 1 comprises Transformation Projects 1, 2, and 3. The following assumptions were made within the scope of each constituent project:

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5.3.1 Project 1 - Better Overnight Cash on Hand Data Assumptions

- As part of this project, it is assumed that the existing Sales MI system will be interfaced to an identical feed of information to that provided to OpTIP. It has been assumed that there will be no development costs associated with the provision of this feed.
- The "opening cash position" of each branch will be obtained from the branches at a defined point. Thereafter, ongoing transactions and declarations from branches will adjust the opening position accordingly. Detailed requirements / design will determine how a co-ordinated opening position is established and synchronised with that held in the current system.
- A complete cash position across the estate cannot be guaranteed due to non-polled branches. It is assumed that the small amount of inaccuracy caused by incomplete polling is acceptable, since the visibility of actual cash position will be significantly better than at present.
- It is assumed that Cheque Endorsement is provided as part of the NS&I (phase 2) changes for S60, and that the Cheque Endorsement functionality proposed for this project will build upon that implemented for NS&I
- The following assumptions are made with respect to the Financial System:
  - All products will be treated in the same way, for the purposes of data feed from Transaction Management
  - Method of payment will be logged correctly at the till
  - The opening balance will be posted to the new ledgers using the derived cash position
  - No changes will be made to standard IDOC/BAPI structures for the interface from Transaction Management
  - Transaction Management will provide SAP Business Connector with information in XML format

5.3.2 Project 2 - Automated Ledgering for Cash / Bank assumptions

- Fund movement information from the banks will be provided in a standard form, which is compatible with SAP. Such information will be posted to the new Financial System as well as to the current Systems.
- It is assumed that Post Office has a standard bank account access package and that Post Office will have the means to transfer the account information to SAP.
- Again, a starting position needs to be obtained for both SAP ADS and the Bank.
- The following assumptions are made with respect to the Financial System within this project:

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- One Bank to interface to the Financial System - additional bank statement interfaces will require more effort
- Cash in transit between Cash Centres and Branches maintained in SAP ADS

5.3.3 Project 3 - Automatic Cash remittance of pouches into branches Assumptions

- It is assumed that Inventory Management for Cash is done within SAP ADS.
- It is assumed that there is a simple way of distinguishing Cash Pouches from Stock Pouches, e.g. by the range of bar codes used
- It is assumed that if Delivery Notes are not available overnight, that they are made available in sufficient time to avoid the need for additional communication connections between branches and the Data Centre.
- It is assumed SAP ADS would want a Delivery Notification returned when Cash is Remitted-In. Alternatively the initial Delivery Notification could be delayed until the goods are Remitted-In. NB it is likely that if the Delivery Note is not in the outlet, then any Delivery Notification will be unable to get to SAP ADS
- The following assumptions are made with respect to the Financial System within this project:
  - Pouch confirmed at branch only on Horizon receipt
  - Every pouch is bar-coded & scanned before goods issue from SAP ADS
  - LFS automatic messaging to and from SAP ADS to branch
  - All cash accounting between cash centres and branches will be done in SAP ADS including cash in transit
  - CFF continues to be used for Cash-flow Forecasting - the information available should be more accurate, having implemented projects 1 to 3.
  - If CFF relies on the declaration information by denomination, the accuracy of this flow is dependent on the business process for declaring cash. If the accuracy of this information is to be improved, it will require a business process change to gather >50% of declarations each night. However, a more accurate total cash position is available from the new Financial System. The Financial System does not hold denominational information or even the split between coins and notes. If this breakdown is not required in CFF, a feed to SAP ADS or CFF can be set up to improve the cash flow forecasting. This is not currently priced in the proposed model.

5.4 E2E Release 2 – Projects 4, 5, 6 and 7

E2E Release 2 comprises Transformation Projects 4, 5, 6 and 7. The assumptions that relate to the projects are documented in the following subsections.

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5.4.1 Project 4 - Branch Liability Management Assumptions

- It is assumed that all Discrepancy Notices will be handled the same way.
- Discrepancy Notices will use memo view interface (i.e. no EPOSS changes required)
- It is sufficient to distribute Discrepancy Notices no more than once per day, and so this mechanism is part of the overnight Bulk processing and does not need to be Interactive
- It is assumed that if an agent rejects a Discrepancy Notice then a different Transaction is written.
- Transactions are summarised before posting into the ledgers
- Transition from the cash summaries in the Project 1 (see section 3.2.1) to the complete BLS will not necessarily take place at the same time for all branches.
- A start position on all accounts within the ledgers needs to be derived from the branch information and aligned with the existing financial systems.
- FS assume that the definition of format and procedures to produce the new Branch Liability Statement can be easily achieved
- During migration it will be essential to produce and process existing cash accounts in parallel with the new Branch Liability statement

5.4.2 Project 5 - Client Settlement and Ledgering Assumptions

- It is assumed that OpTIP can be turned off after this project.
- It is assumed that CBDB will be made to accept the current OpTIP feed.
- It is assumed that information required by the MI System, currently routed via OpTIP, will be passed to the MI system directly (prior to OpTIP being decommissioned)
- It is assumed that summaries of transaction volumes (from the BLS), to be passed to SAP HR to support Postmaster Remuneration, will be provided by a periodic File Interface.
- It is assumed that it is acceptable to reduce the holding of old DRS data from the current 90 days, to the required 56 days.
- It is assumed that a BACS interface will only need to be set up for one bank.
- It is assumed that SAP HR performs agent remuneration calculations using transaction volume information provided by the Transaction Management system and that no additional information needs to be supplied.
- Cost estimates assume that the Transaction Management system has a user population of 150 users, of which there are 40 active at any one time, generating

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approximately 1 transaction a second (in total across all users). Usage profile is assumed to be mixed 60/40 enquiry to update;

- It is assumed that no more than 8 enquiry screens are required

5.4.3 Project 6 - Improved Cash / Stock Management assumptions

- It is assumed that no changes are made to the current mechanism of sending Advice Notes requesting the return of excess / redundant Stock or Cash.
- The interface for all stock items (i.e. cash, value and transaction stock) will be provided by SAP ADS. Costs for the SAP ADS extensions are not included in the estimates provided below;

5.4.4 Project 7 - Automated Ledgering for Stock Assumptions

- It is assumed that the data from SAP ADS will not flow to the ledgers at the SKU level.
- It is further assumed that SKU level information will be available within SAP ADS only.
- Stock value will then be managed in the financial ledgers.
- The integration with Horizon SAP ADS may need to be bigger if product information is required. This is not included in the current costing and will require inventory management (MM) to be operational in the new system.

5.5 E2E Release 3 – Projects 8, 9 and 17

The E2E Release 3 comprises Transformation Projects 8, 9, and 17. The assumptions pertaining to the projects are detailed below.

5.5.1 Project 8 - Personal Agent Ledgers Assumptions

- Assume further analysis will be done to determine further requirements in this area, as the known interfaces to ES-FS have been captured, but no other interfaces from CBDB have been considered.

5.5.2 Project 9 - Simplified & Improved Transaction Processing assumptions

None.

5.5.3 Project 17 - Debt Recovery Case Management

5.5.3.1 Assumptions

- It is assumed within the design for the Financial System that all purchasing goes through ES-FS as at present

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5.6 E2E – Release independent Projects

The following Transformation projects are treated as independent of the three E2E Releases above. It is assumed that these will be included within the three release deliveries as outlined above. Specifically, no additional release costs have been assumed.

5.6.1 Project 10 - Reference Data Improvements (IT Solution)

5.6.1.1 Assumptions

- It is assumed that the business benefits identified with Reference Data Improvements can be realised primarily through improvement of the associated change management processes
- It is assumed that a significant number of the legacy system managed by the current Post Office Reference Data Systems will be replaced as part of the End-to-End Transformation Programme. The residual requirement for Reference Data management within the non-Fujitsu Services estate requires further definition to enable indicative cost estimates to be produced
- Indicative implementation costs for Reference Data management within the Fujitsu Services estate have been included in the individual projects based on current understanding of the requirement
- It is assumed that the current interface from RDS to RDMC is unchanged as a direct result of this project (though other projects may well introduce changes to the interface).

5.6.2 Project 12 - Management Information (local/central)

The target architecture assumes that the MI System is best situated within the enhanced Horizon domain alongside the Transaction Management System. However, for the purposes of pricing, it is assumed that Post Office will continue to operate and evolve the Sales MI system through the present sourcing arrangements. This is because without carrying out due diligence on the presently deployed hardware and implementation of the application, Fujitsu Services cannot assess with any accuracy what steps and upgrades may be necessary to meet the new requirements. Fujitsu Services will be pleased, if requested, to carry out the due diligence and assess specific requirements in future, as there are expected to be significant cost and operational advantages in co-locating the MIS system alongside the Horizon Transaction Management System and employing operating and support services already in place in the manned Horizon Data Centre.

5.6.2.1 Assumptions

- It is assumed that the data feed to the new MIS will be identical to the feed currently supplied to OPTIP. Costs for this feed to the MI system are included in the Project 5 proposal

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5.6.3 Project 13 - Cross Selling

5.6.3.1 Assumptions

- It is assumed that Post Office are responsible for supplying approved text for Cross Selling prompts with appropriate product associations through the use of Reference Data
- System test and release costs are dependent on the composition of the target release, which has not been determined at this stage. These costs are therefore not included in the estimates provided
- It is assumed the present Item Structure mechanism in Type A Reference Data can be extended or exploited to designate the relationship between the products that can be cross sold

5.6.4 Project 14 - HTML Help

5.6.4.1 Assumptions

- It is assumed that Post Office are responsible for supplying approved text for use in HTML Help
- System test and release costs are dependent on the composition of the target release which has not been determined at this stage. These costs are therefore not included in the estimates provided
- It is assumed that the HTML mechanism will be built on top of the structures being set up for Mails, and that the Mails programme provides for the management of its HTML help data

5.6.5 Project 15 - Printing of Virtual Stock

5.6.5.1 Assumptions

- Insufficient requirement details have been provided to cost this project
- The costs associated with improving the printing facilities in all the branches outweigh benefits associated with this project

5.6.6 Project 16 - Local Destruction of Stock

5.6.6.1 Assumptions

- It has been assumed that Post Office will introduce strong business process support to address authorisation, verification, audit and related requirements and that these processes will not require system support other than the functionality detailed in section 3.2.15 above;
- It is assumed that existing mechanisms, such as Advice Notes or Memos, are used to instruct the postmasters that stock should be destroyed.

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- System test and release costs are dependent on the composition of the target release, which has not been determined at this stage. These costs are therefore not included in the estimates provided

5.6.7 Project 18 - Reference Data Process Improvements

5.6.7.1 Assumptions

This project aims to deliver a process improvement by achieving a closer inter-working between the currently separate teams within Post Office and Fujitsu Services, which manage the Reference Data within their separate domains. The proposal is to create a single team environment, thus reducing overlap in the Reference Data verification processes and speeding up the propagation of reference data changes from creators to the ultimate consuming systems.

- Post Office will allocate appropriate resources from the businesses to work with Fujitsu Services to define and implement the process performance improvements required to deliver the target business benefits
- Delivery of this project will not require changes to the Horizon infrastructure and is therefore independent of the Horizon release programme.
- Process improvements will be defined and agreed by 30th September 2003 (Row 2 of Agreement Schedule 12 Annex B)
- Process improvements will be implemented and introduced into the operational service by 31st March 2004 (Row 2 of Agreement Schedule 12 Annex B)

6 Variation of Fujitsu Services Horizon Fees and Charges

The fees and charges in the Horizon Agreement are based on the assumption that simplifications in the Horizon solution resulting from the End-to-End Re-architecture programme will result in a reduction in Fujitsu Services costs. The timetable against which these cost reductions are assumed is detailed in Schedule 12 of the Agreement. In the event that the dependencies detailed in Schedule 12 are not met due to delay or failure on the part of Post Office, Schedule 10 defines additional fees and charges that Post Office will pay Fujitsu Services. This section summarises the status of the Schedule 12 dependencies based on the findings of the End-to-End Feasibility Study and the Fujitsu Services Design Proposal.

6.1 SI Commitment Fee and Additional Systems Integration Charges

6.2 End-to-End

The Variation in SI Commitment Fee and Additional Systems Integration Charges relating to End-to-End Re-architecture are detailed in Section 6.1.1, Schedule 10 of the Horizon Agreement. They relate to the objectives described in the first column of the

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table in Annex A of Schedule 12 (replacement of current TIP and APS feeds by Single Data Source and revised accounting methods).

Objective	£m (p.a.)	£m (Total Contract)	Status
Client business rules based on Trading day (Row 1, Item 1)	0.373	1.867	Addressed (Projects 1-3)
Trading day basis of all accounting periods (Row 1, Item 2)	0.233	1.167	Addressed (Projects 1-3)
Branch Liability Statement Row 1, Item 3	0.327	1.633	Addressed (Projects 1-3,4,5)
Only transaction audit functions at centre (Row 2, Item 2)	0.233	1.167	Assumed achieved by Projects 4,5,9 but Incremental cost for new Transaction Management functions included in Projects 4,5
Standard counter & back office systems (Row 2, Item 3)	0.467	2.333	Partially addressed (Projects 1-3). Remainder assumed dependent on Product Re-Engineering (not addressed by E2E)
EPOSS2 (Row 2, Item 3, 1)	0.233	1.167	Assumed dependent on Product Re-Engineering or major new counter enhancements e.g. for new products (not addressed by E2E)
Digital signature removal (Row 2, Item 3, 6)	0.233	1.167	Not addressed
No central Transaction enrichment (Row 2, Item 4)	0.233	1.167	Assumed dependent on Product Re-Engineering (not addressed by E2E)
No Data Warehouse (Row 3)	0.233	1.167	Assumed will be achieved by Horizon DW elimination (underway) - new costs associated with provision of data feeds to MIS, are included in Project 5
Reduced Documentation requirement (Row 4)	0.233	1.167	Assumed addressed by streamlined processes
Total:	**£2.8m**	**£14m**	

6.3 Changes to Requirements and Testing Regime

The Variation in SI Commitment Fee and Additional Systems Integration Charges relating to changes in the Requirements and Testing Regime are detailed in sections 8.11, 8.12 and 8.13 of Schedule 20 of the Agreement. They relate to an improved development process that will result in reductions in Fujitsu Services Systems Integration costs.

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Objective	£m (p.a.)	£m (Total Contract)	Status
Changes to Requirements and Testing Regime, including: • Conceptual Design and Design Proposal CCD by 31st March 2003 • New Testing Regime CCD by 31st August 2003	£1.4m	£7.0m	Action underway for Conceptual Design and Design Proposal CCD

6.4 Operational Charges

The Variations in Operational Charges are detailed in Section 5.11, Schedule 10 of the Horizon Agreement. They relate to the objectives described in the first column of the table in Annex B of Schedule 12 (simplification of system boundaries and improvement of reference data processes).

Objective	£m (p.a.)	£m (Total Contract)	Status
Simplification of boundaries - reduced solution complexity (Row 1)	0.4	2.0	Addressed (Project 9)
Improved reference data processes (Row 2)	0.2	1.0	Addressed (Project 18)
Total:	**£0.6m.**	**£3.0m**	

7 Proposed Commercial Arrangements

Our proposal for End-to-End re-architecting has been formulated within the commercial framework of the extended Horizon agreement. The proposed commercial arrangements exploit the "Working Together" processes and Pre-paid SI resources.

Projects have been "bundled" into three releases. These are arranged to deliver early wins and are phased to smooth out work for high utilisation of Pre-paid SI.

The scope of the expanded Horizon technical environment, which we are proposing should fall within Fujitsu Services' remit, is designed to establish clean service boundaries, which are optimised for:

- Fujitsu Services' taking of E2E delivery, transition and operational responsibility and risks;
- Eliminating E2E system and personnel overheads associated with system boundaries, which cut across business processes.

The indications of prices given in this document are based on the principles and assumptions set out in the following paragraphs. It has been generally assumed that Post Office will wish this programme to have first call on Pre-Paid SI.

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The cost of hardware for the Financial System is excluded on the assumption that Post Office may have spare capacity. It is Fujitsu Services understanding that Post Office is already licensed for SAP software and so no further S/W charge for this is included.

7.1 Lifecycle process

It is assumed that the Joint IS Landscape process will be followed and that no significant resources or timescales will be expended on competing for packages of the solution.

7.2 System Integration

Fujitsu Services will be the overall Integrator of the E2E solution up to the point where there are clean file transfer boundaries.

Fujitsu Services will be responsible for the technical integration and validation of all application and infrastructure components within the expanded Horizon technical environment

The expanded Horizon technical environment which best meets the objective of clean service boundaries comprises:

- Counter systems in Branches
- Communications network between Branches and the Fujitsu Services data centres;
- Enhanced Horizon Transaction Management Systems - dealing with file transfers to clients, New Financial system, and SAP ADS; on-line transaction processing with clients' or agent's systems (e.g. NBE, Streamline, e-Pay) reconciliation with clients; and support for Post Office back-office operations (discrepancy reconciliation/investigation and notifications)
- New Financial system
- Enhanced Reference Data Management Centre (RDMC) addressing all reference data needs within the Fujitsu Services systems domain
- Logistics Feeder Service (LFS)
- And possibly the MI System, if Post Office agree to transfer the system into the Fujitsu Services domain and contingent on outcome of Due Diligence

Fujitsu Services will also be responsible for establishing clean system and service boundaries with systems outside the expanded Horizon technical environment, in particular with:

- Cash Centre systems (SAP ADS) operated by Business Systems
- Centralised file transfer facility (EDG) operated by Business Systems
- Any new Post Office Reference Data system(s)
- Sales MIS (if remaining outside the Fujitsu Services domain)

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Pricing is presented on the basis of T&M. Post Office may wish to add some element of contingency to allow for possible variances as requirements become clear or Release dates are adjusted.

7.3 Application Development

Fujitsu Services will be the Application Developer for:

- Counter application
- Enhanced Horizon Transaction Management systems
- Enhanced Reference Data Management Centre (RDMC)
- Logistics Feeder Service (LFS)

Fujitsu Services will subcontract the application development of the New Financial System within its overall E2E design, and would welcome close inter-action with Post Office on who that subcontractor should be and on agreement of terms. The baseline assumption used to estimate costs is that development will be undertaken by Fujitsu Consulting (a Fujitsu Services sister company) supported by Zenzar (an offshore development company in which Fujitsu has a significant stake), with additional support from SAP. The costs shown include provision for managing the subcontract.

7.4 Support and Maintenance

Fujitsu Services will support and maintain all systems within the expanded Horizon technical environment, ensuring that appropriate back-to-back arrangements are in place with any supplier/subcontractor.

The proposed solution assumes that users of the Financial and Transaction Management systems will access them from personal computers managed by Business Systems (or Prism). Fujitsu Services will seek to reach an agreement with Business Systems for support of these Post Office users and any application components that need to be maintained on their PCs. Since the Fujitsu Services solution only requires a SAP Client and a Browser on the PC, such arrangements should be straightforward, especially as Business Systems will already be supporting the same SAP Client for Royal Mail Group.

7.5 Operations

The costs associated with systems and services not included in the existing Horizon technical infrastructure are identified as incremental charges. They are derived according to the pricing "rules" set out in the Amendment.

7.6 Service Boundaries

The service boundary is designed to enable Fujitsu Services to take responsibility for the integrity of complete business process outputs:

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- design and development (to API/AIS specifications at the boundary);
- testing and implementation (to DIT testing at the boundary);
- the expanded operations including the Financial Systems

The integrity of the financial and cash information is achieved by applying best practice perpetual inventory and double book-keeping methods and by ensuring that transactions always flow from the counter to the financial system without manual intervention or service boundary.

Data errors caused by system mismatches should be eliminated (except for the case below) by enforcing consistent end of day cut offs and reversal rules.

Reconciliation of on-line transactions as between transaction log and client/ agent system will identify transactions which broke or were cancelled after NWB authorisation (for example) and determine the adjustments which should be made and by whom (client records, settlement, etc.).

Timing differences due to non-polled Branches will still occur and provision is made to deal with these.

Post Office personnel may inspect transactions, which are found to have been subject to EPOSS keying errors (where the value of the transaction is not captured automatically by the system from a token) and post messages to postmasters to correct such errors.

Post Office personnel may inspect transactions subject to bad debts (e.g bounced cheques) and post messages to postmasters to either recover or write off those debts. Alternatively, these messages could be generated automatically according to floor limits. Trend analysis by Branch could be considered as an additional aid to exception management.

The need for reconciliation between TPS and OpTIP is rendered redundant and is eliminated.

8 Possible Alternative Projects

Earlier in the document, alternatives to some of the projects have been identified and these are outlined below:

8.1 Financial System Hardware Option

A preliminary assessment of hardware requirement to support the Financial System and the Central Stock Management (see 8.3) implementations and on-going services on Fujitsu-Siemens platforms running under the Solaris operating system has been made. This is based on Fujitsu Services current understanding of the scale of the Post Office requirement. Section 9 contains the summary sizing and hardware description.

The indicative prices are given in Section 10.

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8.2 Use of SAP / BW as an alternative for MIS

8.2.1 Reporting from SAP BW

SAP BW is presented here as an alternative to using MI to report the Profit and Loss by Branch, Client, Product type, etc. This would be closely linked to the SAP financials and fed by the transaction management system in such a way that reconciliation to the financials would be much easier than using a separate MI system. SAP BW and SAP financials would be fed with the same source information with different levels of granularity.

The objective for this alternative project would be to hold the data in BW in a low level format for operational purposes for a limited period (e.g. 90 days) and then archive it, leaving the report information, summarised into InfoCubes for on-going reporting purposes. This will avoid duplication of the detailed level information and also make reporting more efficient. The information is summarised into multi-dimensional InfoCubes which are dependent on the business dimensions e.g. Branch, Client, Product type, Trading day etc.

Another advantage of using SAP BW to fulfil this function is that any structures e.g. profit centre hierarchy can be mapped directly between the systems, such that changes made in the financials will flow through to BW. SAP BW offers a seamless integration with other SAP components, which enables and simplifies the extraction of business objects at the application level.

8.2.2 Background

SAP BW is part of the SAP Business Intelligence solution. It delivers enterprise-wide data warehousing, a business intelligence platform, and a suite of business intelligence tools. To meet varying needs, SAP BW has three conceptual layers: an operational data store, a data warehouse, and multidimensional models. These three layers are built on the SAP BW information model.

Because Post Office will be collecting business information from various sources, BW can facilitate the integration of that data into one reporting source. BW comes equipped with various extraction, transformation, and loading (ETL) tools, which facilitate the inclusion of non-SAP data into the BW system. For POL, the majority of source information will be provided by from the Transaction Management System. This information will be brought into BW using Business Application Programming Interfaces (BAPIs), which will be designed depending on the POL data model.

A data warehouse is designed to optimise queries on large amounts of historic and granular data, supporting strategic, rather than operational, decision making. An operational data store (ODS) is designed to support queries on small amounts of granular data that is updated frequently. It stores detailed data and supports tactical, day-to-day decision-making. SAP views ODS as a near real-time information environment that supports operational reporting by interacting with existing transactional systems, data warehouses, or analytical applications.

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The final topology of the SAP BW solution will be dependent on the information needs of POL. This will require further analysis before the final design recommendation to address the MI requirements, especially considering those items which are currently being dealt with in the Sales MI solution e.g. for basket analysis and trend analysis. It is assumed that this will not be included in this SAP BW solution.

SAP BW provides a flexible approach to data warehousing topology. It provides the capabilities needed to build and maintain an enterprise data warehouse, and the technology to support data marts that are closely linked to the central data warehouse. This coherent topology maintains a clear, enterprise-wide view while it reduces data redundancy and inconsistency.

The implementation approach by Fujitsu would be to use a 'TeamSAP' team along with SAP to design and deliver the BW solution for POL, given the complexity of the requirements and current systems. The implementation team would be lead by a SAP BW architect and the progress of design and implementation would be periodically QA-checked by SAP Walldorf for tuning the system and ensuring the optimal system capability is achieved.

It is assumed that the licenses for BW are included in the licensing agreement that Royal Mail Group already has in place with SAP. Additional licenses may need to be purchased against this agreement. Costs for BW licenses have therefore not been included in this estimate.

8.3 Central Stock Management (Value stocks)

It is possible to implement the MM (materials management) module on the same system as the financials in order to manage stock in the Swindon warehouse. This will enable the visibility of stock levels and therefore the potential liability for stock losses.

In order to implement this an interface will be required from the existing Warehouse Management for goods received and sent from the warehouse. The functionality available within MM standard functionality is described in the following sections.

8.3.1.1 Planned orders and stock replenishment

Central Requirements Planning involves ensuring that articles are available when recipients (e.g. Branches) require them. The quantities required have to be procured in good time. The following activities are required:

- Monitoring the stock
- Taking open stock transfer orders of recipients into account
- Creating forecasts
- Calculating requirement quantities
- Creating follow-on documents
- Approvals

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8.3.1.2 Stock transport orders

Stock Transport Orders can be used if it is necessary to record the transfer of stock between sites (Warehouse, Branches) e.g. if those sites are in two different physical locations in the country, and a formal document requesting the transfer should be sent to the supplying site.

A transfer to stock in transit is then carried out by the supplying site, with reference to the PO, followed by a stock receipt in the receiving site.

8.3.1.3 Inventory Management and Logistic Execution

Recording (via interfaces from related systems in Warehouse and Branches) results of:

- Outbound processing

Goods issues for outbound deliveries

- Inbound processing

Transfer Postings

- Other goods movement
- Counting/revaluation figures

8.3.2 Assumptions:

- All purchasing goes through ES-FS as current
- Warehouse(s) system(s) will be able to send required data
- Branch related data would be received from Horizon

This costing assumes Swindon Warehouse only - not Hemel as this is assumed to be in the RMG domain

9 Sizing Assumptions for SAP R/3

The Following assumptions have been used when sizing the SAP R/3 System.

Selected User Data

R/3 Module	No. Users	Grade	Sessions
FI	70	Light	1.5
FI	180	Normal	1.5
FI	60	Heavy	1.5
CO	20	Normal	1.5
CO	10	Heavy	1.5

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MM	20	Normal	2.0
MM	10	Heavy	2.0

Selected Transaction Data

Transaction	Remark	Batch/Direct	#/Y	#LINES	Time Interval
Reporting	PCA Reports	Batch	5000	100000	00:00 - 18:00
Postings to Client Ledgers	Purchase invoice	Batch	500000000	1	00:00 - 07:00
Client Settlement	Outgoing payments	Batch	36000	1	09:00 - 19:00
Postings From Transaction Management	GL account entries	Batch	1000000000	1	00:00 - 19:00
Client Settlement	Outgoing payments	Direct	500	12	08:00 - 18:00
From Debtors	Receipts of payment	Direct	5000	12	08:00 - 18:00
Stock out from Branch	Goods out	Batch	10000000	1	00:00 - 19:00
Remits into Branch	Goods received	Batch	1000000	1	08:00 - 19:00

Disk space is calculated to be 1.5 TB of data, based on a retention period of 3 months.

Further analysis is required to validate the posting frequency and granularity and also, the frequency of the archiving. The calculation of these figures was initially based on a combination of the light and heavy options on data processing as noted in the Post Office document entitled "Granularity of Ledgers". The light option gave approximately 600m transactions and the heavy option gave approx. 13.5bn transactions to be posted to the GL annually. It has been assumed that 1bn would be closer to the actual postings depending on the final set up and procedures. This will need to be reassessed once further analysis has been carried out.

These SAP sizing assumptions have led to the following platform configuration

- The Oracle database, which will support the implementation, will be hosted in the main Horizon Data Centre on an Open Systems 20way 1.3 Ghz Sparc Solaris platform with 24GB of memory

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- This System having 4.5 TB of EMC disc storage attached. 3TB duplexed business data and 1.5TB business continuity volume, to assist backup
- A smaller DR system with its own 4.5TB of disc storage will be sited in the Horizon DR site. As a consequence, a reduced service would be offered in the period immediately following a disaster.
- Fourteen application servers, split between the two sites provide support for the end users and batch processing.
- An additional tape library will be established at each site to provide back up and restore capabilities

10 Fujitsu Capability

The E2E programme, as devised, makes available to Post Office a wide range of Fujitsu Group capabilities.

The Financial System proposal is based on experience and resources of Fujitsu Consulting, an important member of the Fujitsu family. Application Management for SAP is proposed to be supported by Zenzar. Hardware sourcing is proposed from Fujitsu-Siemens.

Fujitsu Consulting (FC)

Fujitsu Consulting with in excess of 700 consultants across 10 countries has been delivering SAP-based solutions for a number of years, and has recently signed a letter of intent to become a Global SAP Services Partner. This reinforces the FC commitment, in every region, to close working with SAP to deliver quality solutions to their clients and demonstrates the regard that SAP has for the organisation's capabilities.

FC has a Fujitsu Consulting Solutions Centre in India, with more than 70 SAP consultants, from which FC can resource projects to reduce the cost of implementation and on-going support to UK clients. The organisation in India is ISO9001 and RPG QA certified, and is the first organisation to achieve and enterprise wide SEI CMM Level 5 Certification.

Fujitsu, through Fujitsu Siemens Computers runs a Global mySAP Competence Centre at SAP Walldorf, where FC work closely with SAP to develop robust platforms and new solutions e.g. Mobility.

Fujitsu boasts a Global Technology Partnership with SAP. Once FC achieves their Global Services Partnership, FC will have both Global Partnerships in place. Fujitsu will be one of 3 organisations in the world that will be able to make this claim.

Fujitsu Consulting in the UK has a growing SAP delivery capability which consists of Functional and Technical Consultants who are able to deliver SAP solutions to it's clients.

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For the Post Office Project FC will resource the implementation with a combination of local project management, local functional consultants and development consultants sourced from their offshore centre, who will work locally during the implementation.

Using a combination of ASAP (SAP's implementation methodology) and Fujitsu's Macroscope Methodology, FC are able to implement SAP to a high standard of quality and proven sustainability.

References:

Fujitsu Consulting in the UK has implemented SAP functionality in various organisations, including:

- Honda Motors Europe (HME). FC extended HME's SAP system to include export functionality.
- Fujitsu Siemens Computers (FSC). FC provided a team to implement SAP in FSC's UK subsidiary. FC also provided project management for the European rollout. FC worked in cooperation with SBS (Siemens Business Systems) in Germany.
- Greenfield retail organisation rolling out to the UK on SAP IS-Retail.
- THUS. Scottish telecommunications company for whom FC provide on-going support and maintenance of their productive SAP environment.

FC has several current projects, which include HME, who have asked FC to return to implement their European Trading System on SAP and another blue chip manufacturing company for whom FC are developing their manufacturing functionality on SAP. FC has also developed a pre-configured solution on SAP, which FC is implementing in a manufacturing organisation, which supplies the motor industry.

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11 Costs and Benefits

The benefits attributed to each of the projects are cross-referenced to the relevant section in the Post Office Business Requirements Specification entitled *Business Requirements – End-to-End Re-Architecting Post Office Product, Branch, Client, Cash and Stock Processes & Systems Feasibility Study*, a paper which was published on 21/2/03.

The following subsections present the implementation costs together with a cost/benefit analysis of the individual End-to-End Transformation Projects described in this proposal. In the context of the cost tables below, the term "Horizon Software" is used to refer to platform related software (e.g. operating system and DBMS). The term "Horizon SI" is used to refer to resources used for Horizon application development and support activities.

11.1 Business Process Analysis & Programme Management

11.1.1 Business Process Analysis & Design

Resource Type	Man Days	Estimated Task Total
Horizon SI	305	£370,840
Additional Resources (Financials)	50	£66,600
TOTAL		**£437,440**

11.1.2 Programme Management

Resource Type	Man Days	Estimated Task Total
Horizon SI	1330	£1,152,045

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11.2 E2E Release 1 – Projects 1, 2, and 3

11.2.1 E2E Release 1 Costs

COST CATEGORIES	CHARGEABLE (One Off)	CHARGEABLE (p.a.)
Horizon SI Initial (Devt & Test)	£1,303,533	
Horizon CS Release	£16,950	
Horizon SI Ongoing		£61,595
Horizon CS Operate		£328
Financials SI Initial (Devt & Test)	£1,405,770	
Financials SI Ongoing		£378,600
HORIZON SUB-TOTAL	**£1,320,482**	**£61,923**
FINANCIAL SYSTEM SUB-TOTAL	**£1,405,770**	**£378,600**
TOTAL	**£2,726,252**	**£440,523**

11.2.2 E2E Release 1 Benefit analysis

Annual Benefit (from E2E Business Requirements Specification)

					£m p.a.
Automated accounting cash deliveries/collections - less write-offs (3.2.1 benefit 2)	100%	of	1.00	=	1.00
Improved understanding of cash cycle decreases borrowing costs (3.2.1 benefit 3)	100%	of	0.40	=	0.40
Improved understanding of cash cycle to improve cash flow (3.2.1 benefit 5)	100%	of	2.20	=	2.20
					3.6

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11.3 E2E Release 2 – Projects 4, 5, 6 and 7

11.3.1 E2E Release 2 Costs

COST CATEGORIES	CHARGEABLE (One Off)	CHARGEABLE (p.a.)
Horizon SI Initial (Devt & Test)	£5,147,164	
Horizon CS Release	£223,838	
Horizon Hardware Purchase	£576,532	
Horizon SI Ongoing		£275,005
Horizon CS Operate		£4,102
Horizon Hardware Maintenance		£115,306
Financials SI Initial (Devt & Test)	£2,344,280	
Financials SI Ongoing		£318,120
HORIZON SUB-TOTAL	**£5,947,533**	**£394,412**
FINANCIAL SYSTEM SUB-TOTAL	**£2,344,280**	**£318,120**
TOTAL	**£8,291,813**	**£712,532**

11.3.2 E2E Release 2 Benefit analysis

Annual Benefit (from E2E Business Requirements Specification)

					£m
Automated order processing from branch through to cash centre (3.2.1 benefit 1)	100%	of	0.40	=	0.40
Automated order processing (Transaction Stock) (3.2.2 benefit 1)	100%	of	0.40	=	0.40
Reduction in Hemel costs - headcount (3.2.2 benefit 2)	60%	of	0.50	=	0.30
Reduction in stock specials - transport (3.2.2 benefit 3)	100%	of	0.20	=	0.20
Stock write-offs (3.2.2 benefit 4)	100%	of	0.10	=	0.10
Re-engineering of products and	25%	of	0.20	=	0.05

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Annual Benefit (from E2E Business Requirements Specification)					£m
forms (3.2.3 benefit 2)					
Creation of effective debt management process (3.2.3 benefit 3)	100%	of	1.00	=	1.00
Implementation of new accounting model (3.2.3 benefit 4)	100%	of	0.10	=	0.10
Elimination of legacy systems - OpTIP (3.2.3 benefit 5)	100%	of	4.20	=	4.20
					6.75

11.4 E2E Release 3 – Projects 8, 9 and 17

11.4.1 E2E Release 3 Costs

COST CATEGORIES	CHARGEABLE (One Off)	CHARGEABLE (p.a.)
Horizon SI Initial (Devt & Test)	£1,797,851	
Horizon CS Release	£426,203	
Financials SI Initial (Devt & Test)	£1,126,882	
Financials SI Ongoing		£75,720
HORIZON SUB-TOTAL	**£2,224,053**	**£0**
FINANCIAL SYSTEM SUB-TOTAL	**£1,126,882**	**£75,720**
TOTAL	**£3,350,935**	**£75,720**

11.4.2 E2E Release 3 Benefit analysis

Annual Benefit (from E2E Business Requirements Specification)					£m p.a.
Re-engineering of products and forms (3.2.3 benefit 2)	75%	of	0.20	=	0.15
Elimination of legacy systems - CBDB (3.2.3 benefit 6)	100%	of	1.30	=	1.30
Elimination of legacy systems - small systems (3.2.3 benefit 7)	100%	of	0.70	=	0.70
Variation in Horizon SI Commitment Fee (3.2.7 benefit 1)	50%	of	4.20	=	2.10

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Annual Benefit (from E2E Business Requirements Specification)

					£m p.a.
Variation in Horizon Operating Charge (3.2.7 benefit 2)	66.7%	of	0.60	=	0.40
					4.65

11.5 E2E – Release independent Projects

The following Transformation projects are treated as independent of the three E2E Releases above. The indicative costs presented do not include a provision for release related system testing and release costs, which would need to be estimated and added to these costs when the functional composition of the target release is known.

11.5.1 Project 10 - Reference Data Improvements (IT Solution)

11.5.1.1 Costs

Costs have not been provided for this project.

11.5.2 Project 12 - Management Information (local/central)

11.5.2.1 Costs

Costs have not been provided for this project; see 1st assumption above.

11.5.3 Project 13 - Cross Selling

11.5.3.1 Costs

COST CATEGORIES	CHARGEABLE (One Off)	CHARGEABLE (p.a.)
Horizon SI Initial (Devt & Test)	£166,096	
Horizon SI Ongoing	-	£11,733
TOTAL	**£166,096**	**£11,733**

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11.5.3.2 Benefit assessment

Annual Benefit (from E2E Business Requirements Specification)

					£m p.a.
Creation of product related cross selling (3.2.4 benefit 3)	100%	of	0.50	=	0.50
					0.50

11.5.4 Project 14 - HTML Help

11.5.4.1 Costs

COST CATEGORIES	CHARGEABLE (One Off)	CHARGEABLE (p.a.)
Horizon SI Initial (Devt & Test)	£171,941	-
Horizon SI Ongoing	-	£11,159
TOTAL	**£171,941**	**£11,159**

11.5.4.2 Benefit assessment

Annual Benefit (from E2E Business Requirements Specification)

					£m p.a.
Conformance - Increased use of prompts (3.2.4 benefit 4)	100%	of	0.50	=	0.50
					0.50

11.5.5 Project 15 - Printing of Virtual Stock

11.5.5.1 Costs

Costs have not been provided for this project as it was confirmed as being non-viable, in its current form, at the 17th March 2003 End-to-End Programme Steering Group meeting.

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11.5.6 Project 16 - Local Destruction of Stock

11.5.6.1 Costs

COST CATEGORIES	CHARGEABLE (One Off)	CHARGEABLE (p.a.)
Horizon SI Initial (Devt & Test)	£244,290	-
Horizon Software Purchase	-	-
Horizon SI Ongoing	-	£14,917
TOTAL	**£244,290**	**£14,917**

11.5.6.2 Benefit assessment

Annual Benefit (from E2E Business Requirements Specification)

					£m p.a.
Reduction in Hemel costs - headcount (3.2.2 benefit 2)	40%	of	0.50	=	0.20
					0.20

11.5.7 Project 18 - Reference Data Process Improvements

11.5.7.1 Costs

Resource Type	Man Days	Estimated Task Total
Horizon SI	170	£194,240

11.5.7.2 Benefit assessment

Annual Benefit (from E2E Business Requirements Specification)

					£m p.a.
Implement Virtual team (3.2.5 benefit 2)	100%	of	0.50	=	0.5

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Annual Benefit (from E2E Business Requirements Specification)

					£m p.a.
Variation in Horizon Operating Charge (3.2.7 benefit 2)	33.3%	of	0.60	=	0.20
					0.70

11.6 Cost Summary

The total set of costs for all the projects addressed by this proposal (excepting the SAP / BW MIS and Central Stock Management options detailed in section 8 is summarised in the table below.

COST CATEGORIES	CHARGEABLE (One Off)	CHARGEABLE (p.a.)
Horizon SI Initial (Devt & Test)	£10,547,999	
Horizon CS Release	£666,991	
Horizon Hardware Purchase	£576,532	
Horizon SI Ongoing		£374,409
Horizon CS Operate		£4,430
Horizon Hardware Maintenance		£115,306
Financials SI Initial (Devt & Test)	£4,943,532	
Financials SI Ongoing		£772,440
HORIZON SUB-TOTAL	**£11,791,521**	**£494,145**
FINANCIAL SYSTEM SUB-TOTAL	**£4,943,532**	**£772,440**
TOTAL GROSS PRICE	**£16,735,053**	**£1,266,585**
ESTIMATED PRE-PAY	**£7,129,600**	
TOTAL NET PRICE	**£9,605,453**	

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Initial analysis of the man power requirement over the period April 2003-March 2005, during which the Transformation Programme development is assumed to be executed (see Roadmap in section 4), shows that the achievable utilisation of Pre-Pay amounts to 9,094 man days from a total of 13.455 man days eligible from Pre-Pay. This number assumes that in any one monthly period a maximum of 70% of the available Pre-Pay SI will be usable by the E2E Programme. Taking this into account the calculated Net Price is as shown above. The main assumption in this analysis is that the End-to-End Programme has first call on Pre-Pay resources.

11.7 Cost Benefit Summary

Annual Benefit (from E2E Business Requirements Specification)					
	%		**£m**		**£m p.a.**
Automated order processing from branch through to cash centre (3.2.1 benefit 1)	100%	of	0.40	=	0.40
Automated accounting cash deliveries/collections - less write-offs (3.2.1 benefit 2)	100%	of	1.00	=	1.00
Improved understanding of cash cycle decreases borrowing costs (3.2.1 benefit 3)	100%	of	0.40	=	0.40
Improved understanding of cash cycle to improve cash flow (3.2.1 benefit 5)	100%	of	2.20	=	2.20
Automated order processing (Transaction Stock) (3.2.2 benefit 1)	100%	of	0.40	=	0.40
Reduction in Hemel costs - headcount (3.2.2 benefit 2)	100%	of	0.50	=	0.50
Reduction in stock specials - transport (3.2.2 benefit 3)	100%	of	0.20	=	0.20
Stock write-offs (3.2.2 benefit 4)	100%	of	0.10	=	0.10
Re-engineering of products and forms (3.2.3 benefit 2)	100%	of	0.20	=	0.20
Creation of effective debt management process (3.2.3 benefit 3)	100%	of	1.00	=	1.00
Implementation of new accounting model (3.2.3 benefit 4)	100%	of	0.10	=	0.10
Elimination of legacy systems - OpTIP (3.2.3 benefit 5)	100%	of	4.20	=	4.20
Elimination of legacy systems - CBDB (3.2.3 benefit 6)	100%	of	1.30	=	1.30
Elimination of legacy systems - small systems (3.2.3 benefit 7)	100%	of	0.70	=	0.70

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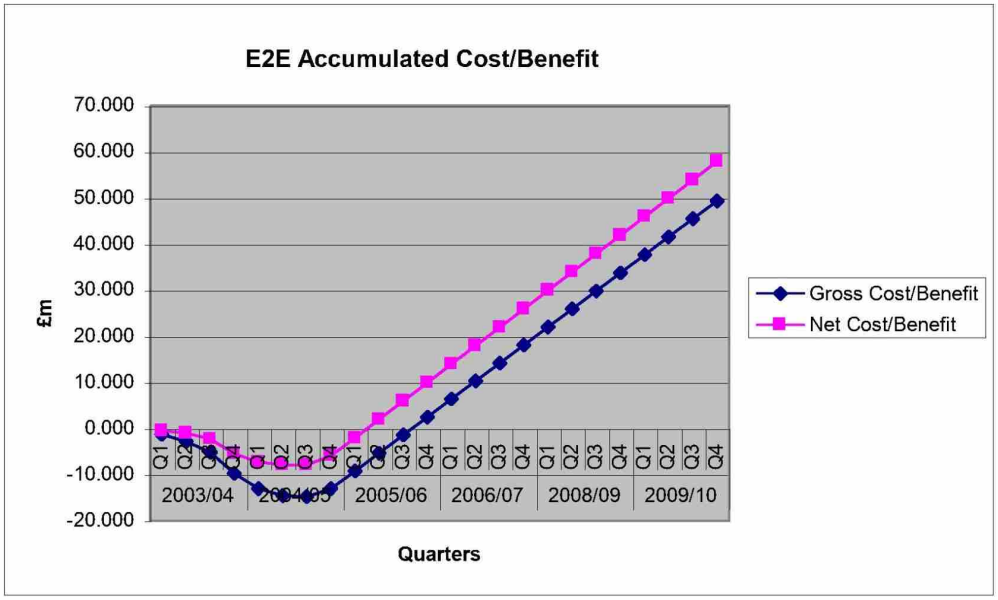
Annual Benefit (from E2E Business Requirements Specification)					
	%		£m		£m p.a.
Creation of product related cross selling (3.2.4 benefit 3)	100%	of	0.50	=	0.50
Conformance - Increased use of prompts (3.2.4 benefit 4)	100%	of	0.50	=	0.50
Implement Virtual team (3.2.5 benefit 2)	100%	of	0.50	=	0.50
Variation in Horizon SI Commitment Fee (3.2.7 benefit 1)	50%	of	4.20	=	2.10
Variation in Horizon Operating Charge (3.2.7 benefit 2)	100%	of	0.60	=	0.60
			Total:		**16.90**

The following graph illustrates the relationship between projected expenditure (gross and net) and associated business benefit realisation.



11.8 Option – SAP Financial & Stock Management System Hardware

The costs below cover hardware provision for both the Financial Management and Stock Management systems. This option may be attractive if Post Office intend to move towards fully Open Systems infrastructure.

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11.8.1 Costs

COST CATEGORIES	CHARGEABLE (One Off)	CHARGEABLE (p.a.)
Financials CS Release	£360,382	
Financials Hardware Purchase	£2,714,671	
Financials Software Purchase	£58,811	
Financials CS Operate		£39,753
Financials Hardware Maintenance		£542,934
Financials Software Support		£11,762
TOTAL	**£3,133,864**	**£594,449**

11.9 Option – SAP / BW Alternative to MIS

11.9.1 Costs

These costs relate to the option described in section 8. The indicative costs presented do not include a provision for End-to-End system testing and release costs, which would need to be estimated and added to these costs when the functional composition of the target release is known. The SAP license requirements are assumed to be covered by existing Post Office/Royal Mail Group SAP licensing arrangements and no provision is therefore included below.

COST CATEGORIES	CHARGEABLE (One off)	CHARGEABLE (p.a.)
Financials SI Initial (Devt & Test)	£1,422,523	
Financials Hardware Purchase	£941,276	
Financials SI Ongoing		£242,400
Financials Hardware Maintenance		£188,255
TOTAL	**£2,363,799**	**£430,655**

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11.10 Option – Central Stock Management

11.10.1 Costs

These costs relate to the option described in section 8.3. The indicative costs presented do not include a provision for End-to-End system testing and release costs, which would need to be estimated and added to these costs when the functional composition of the target release is known. The SAP license requirements are assumed to be covered by existing Post Office/Royal Mail Group SAP licensing arrangements and no provision is therefore included below. The hardware costs (including on-going maintenance) are assumed to be covered by the hardware platform arrangements for the main SAP financial system and are therefore not included in the costs below.

COST CATEGORIES	CHARGEABLE (One Off)	CHARGEABLE (p.a.)
Financials SI Initial (Devt & Test)	£528,950	
Financials SI Ongoing	-	£151,440
TOTAL	**£528,950**	**£151,440**

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12 Glossary of Terms

For readability, an effort was made to limit the usage of abbreviations. Where these are used, they are generally explained; however, in diagrams and where brevity was preferable abbreviations do appear.

ACT	Automated Credit Transfer
AP	Automated Payment
APS	Automated Payment Service – an existing Horizon facility, will continue as part of Transaction Management
BACS	Banking Automated Clearing Service. BACS Ltd. – The company that owns and operates the automated clearing house that processes Direct Debits and Direct Credits on behalf of the UK banks
BAPI	Business Application Programming Interfaces (SAP's tool for data integration with systems external to SAP)
BCV	Business Continuity Volume. An EMC Facility for taking backups of data with minimal downtime.
BLS	Branch Liability Statement
BW	Business Warehouse, SAP's integrated MI system.
CBDB	Counters Business Database - Existing Post Office system for managing financial information
CCMS	Computer Centre Management System
CFF	Cash Flow Forecasting
CLASS	Existing System (part of CBDB) – Counter Ledgers and Settlement System, to be replaced by new financial system
CO-CCA	SAP Cost Accounting Module - Cost Centre Accounting
CO-PCA	SAP Cost Accounting Module – Profit Centre Accounting
CS	Correspondence Server
CSM	Customer Service Management
DB	Data Base
DBMS	Data Base Management Software
DR	Disaster Recovery

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DRS	Data Reconciliation Service – an existing Horizon facility to be expanded to form the basis of Transaction Management
DTI	Department of Trade and Industry
EDG	Enterprise Data Gateway – existing Royal Mail Group facility for data transmission (to clients)
EMC	American Corporation which manufactures highly resilient, high volume data disk storage systems [Also Electromagnetic Conductance when used in context of testing systems for emitted radiation]
EOD	End of Day
EPOS	Electronic Point Of Sale
E2E	End-to-End
ERP	Enterprise Resource Planning
ES-FS	Enterprise SAP Financial System –existing Royal Mail Group system
FI-CO	SAP Finance Module Cost Accounting
FI-AP	SAP Finance Module Accounts Payable
FI-AR	SAP Finance Module Accounts Receivable
FI-GL	SAP Finance Module General Ledger
FJ	Fujitsu
FJS	Fujitsu Services
FTMS	File Transfer Management System
GL	General Ledger
HTML	Hyper Text Mark-up Language
H/W	Hardware
IDOC	Intermediate Document (SAP's tool for containing data for delivery to/from SAP)
IS/IT	Information Systems/Information Technology
LAN	Local Area Network
LFS	Logistics Feeder Service
MIS	Management Information System
MI	Management Information

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MM	Material Management
MOP	Method of Payment
MSU	Management Support Unit (within Fujitsu Services, Customer Service)
NBE	Network Banking Engine
NS&I	National Savings and Investments
OBC	Outlet Business Change
OBCS	Order Book Control Service
ONCH	Overnight Cash Holdings
OPTIP	Existing Post Office system - Operational Transaction processing system, to be replaced by Transaction Management
OS	Operating System
PCA	Profit Centre Accounting
PIVOT	Postmasters Information – Volumes of Transactions (POL)
POL	Post Office Ltd
PO-FS	Post Office Financial System
Prism	CSC led consortium bidding for RMG Outsource
QA	Quality Assurance
RDDS	Reference Data Distribution Service (Fujitsu Services)
RDMC	Reference Data Management Centre – existing Horizon facility
RDS	Reference Data System - Existing Post Office system
Riposte	Product from Escher Group, part of Horizon solution
RMG	Royal Mail Group
SAP	Systeme, Anwendungen, Produkte in der Datenverarbeitung AG (a German software manufacturer)
SAP ADS	SAP Advanced Distribution System
SAP BW	SAP Business Warehouse – SAP supplied component
SAP FI	SAP Financials
SAP HR	SAP Human Resources support system within Royal Mail Group
SAP R/3	SAP Enterprise Resource Planning package
SI	Systems Integration

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SKU	Stock Keeping Unit
SLA	Service Level Agreement
SPM	Sub-Postmaster
STO	Stock Transport Orders
S/W	Software
TME	Tivoli Management Environment – existing Horizon infrastructure product set, supporting s/w distribution, event management
TPS	Transaction Processing Service – existing Horizon service
TSD	Technical Support Desk – existing Horizon support service
UAT	User Acceptance Test
VPN	Virtual Private Network, security service protecting wide-area network and also in the local area network within the branches
WAN	Wide Area Network
WRDS	Warehouse Reference Data System – existing Post Office system developed in conjunction with the Sales MI system
XML	eXtensible Mark-up Language