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Solution Definition Document

POL SAP Finance System (Release 1)

Author	:	Mark Cannon
Release Date	:	21st April 2004
Version	:	v1.0
Document Reference	:	POLFS-SDD-1.0
Document Name	:	SDD POL SAP FS - v1.0.doc

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Authorisations:

CSC Application Services Approval:

Date: _____

Name: Jonathan Higginbottom

CSC GIS Approval:

Draft E – Richard Hopewell – SAP TCE   22nd March 2004
Draft E – Hugh Dangerfield – Technical Architect   4th March 2004

Date: _____

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Business Unit Architect Approval:

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Date: *20th Feb 2003*

Name: Rob Bradshaw (Prism IMPACT Programme DA)

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**Solution Definition Document
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0   Change Control

0.1   Change Process

Any changes to this issued version of this document will be made, controlled and distributed by:

Mark Cannon
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0.2   Change History

The latest version of this document supersedes all other previous issues.

Issue	Date	Author	Comments
Draft A	14th Dec 2003	Mark Cannon	Initial Draft for comment
Draft B	15th Jan 2004	Mark Cannon	Updated latest security assumptions Clarified master data loads Clarified various interfaces details
Draft C	9th Feb 2004	Mark Cannon	Formal document review – see quality review forms
Draft D	13th Feb 2004	Mark Cannon	Updated following POL/Prism/Fujitsu meeting on 12th Feb 2004 at Rowland Hill House
Draft E	20th Feb 2004	Mark Cannon	Minor updates following quality review by RB Added Appendix B & C to copy in options papers at request of RB
V1.0	21st April 2004	Mark Cannon	DR of printing not required for S80 Printer platform recommendation Printer volumes updated post testing SAP Workplace Support changes Version updated to 1.0 for release and baselining.

Table 1: Version History

A detailed change log has been kept from Draft C – Please refer to Appendix A – Amendment & Change Log

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0.3 Changes Planned

The following areas are yet to be agreed:

0.3.1 Service Management (Section 8.3)

- Details of Service Management are to be clarified.
- Current working assumption is that automated alerting is not required for Release 1.

0.3.2 Business Continuity Strategy (Section 8.5)

- POL to clarify if hardcopy printing would be required in a DR scenario for Release 3.
- POL to clarify if all components need DR (e.g. Banking Gateway).
- Prism to provide POL with DR subscription costs.
- POL to clarify if all processes (and therefore components) would be required in a DR scenario.
- Fujitsu to clarify design regarding them providing network connectivity into Prism DR site.

0.3.3 Network (Section 8.6)

- Fujitsu to clarify design regarding them providing network connectivity into Prism DR site.

This document will be updated to reflect the solution as it will be for Release 3.

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0.4 Distribution Record

This document will be distributed to the following individuals for comment:

Name	Job Title / Company	Draft A	Draft B	Draft C	Draft D	Draft E	Rel. 1.0
Peter Flood peter.flood GRO	Project Manager / Prism	✓	✓	✓	✓	✓	✓
Rob Bradshaw rob.bradshaw GRO	Design Authority / Prism	✓	✓	✓	✓	✓	✓
David Gray david.gray GRO	POL Business Unit Architect / Prism		✓	✓	✓	✓	
Richard Hopewell rhopewell2 GRO	SAP Technical Specialist / Prism	✓	✓	✓	✓	✓	
Adrian Winwood awinwood GRO	SAP Technical Specialist / Prism					✓	✓
Philip Godden philip.godden GRO	SAP Application Design Lead / Prism		✓	✓	✓	✓	✓
Roger Stevenson rstevenson GRO	Head of SAP TCE / Prism		✓	✓	✓	✓	✓
Penny Maguire penny.maguire GRO	SAP Consultant / Prism (Release 1 Application Lead)		✓	✓	✓	✓	✓
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Darcy Hall dhall42 GRO	Technical Project Manager / Prism			✓	✓	✓	✓
Hugh Dangerfield hdangerf GRO	Technical Architect / Prism	✓	✓	✓	✓	✓	✓
Mike Stephens mike.stepehens GRO	Chief Architect (Xansa) / Prism					✓	✓
Jonathan Higginbottom jhigginbott2 GRO	Chief Architect (CSC) / Prism					✓	✓
Nial Finnegan nial.finnegan GRO	Solution Architect / Fujitsu Services					✓	✓
	POL IMPACT Programme Project Office					✓	✓

Table 2: Distribution List

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1 Introduction

Post Office Ltd has been working with Fujitsu Services and the Prism Alliance to examine ways of streamlining their business processes and systems. This initiative, the IMPACT Programme (initially called "End-to-End Re-architecture"), has been broken down into three releases, with each release consisting of a number of projects. The three releases are aligned to with Horizon releases i.e. Release 1 = Horizon S60, Release 2 = Horizon S70, and Release 3 = Horizon S80. The new POL SAP Finance system will be implemented in two stages – Release 1 (S60) and Release 3 (S80).

The first release consists of 3 projects. The second of these projects (Project 2) involves the introduction of a new SAP service to provide Financial Accounting information for Post Office. At S60 the SAP service is focusing on Cash Handling, with a fuller financial service being introduced at release 3 (S80).

Fujitsu Services has been given the responsibility for hosting the SAP application service and Prism has been given the responsibility of hosting the presentation layer and support of the end user access and printing. This document focuses on the areas that Prism is responsible for. The focus of this document is on the first release, but taking into account the scalability requirements for Release 3, based on what information is available.

The name given to the new SAP system is POL FS.

1.1 Purpose

The purpose of this document is to describe the overall solution architecture for POL SAP Finance System (Release 1). It describes the design of all components of the solution, within the context of a current understanding of the business requirements and the shared Prism / Fujitsu responsibilities.

This document aims to deliver enough detail to arrive at a cost for the proposal and a scope and high level task list for the project definition. This document must be reviewed by the CSC, BT and Xansa Architecture teams prior to its use as the basis of an estimate or project definition.

1.2 Scope

This document will identify the major business requirements, the constituent applications and infrastructure components and their respective roles in the context of sample end-to-end business scenarios. Additionally this document will outline the guiding principles on which the architecture and subsequent physical implementation will be based. Overall this document and associated presentation will serve as a vehicle for communication and common understanding and as a basis for more detailed cost definition and project planning.

However, this document does not attempt to fully define the relative responsibilities of each of the constituent projects required to implement the required infrastructure nor present detailed cost elements, and equally does not attempt to align milestones and plans in this respect.

In this document the architecture will take into account those business requirements which have formally emerged through recent discussion and through improved understanding of the business unit needs, and any external constraints.

This document covers the whole solution at a high level. It should be noted that:
- Application hosting aspects are owned by Fujitsu Services and are covered in a separate series of documents managed by them.
- The other Technical Architecture elements are owned by CSC (Computer Sciences Corporation) and are covered in more detail by a series of documents managed within GIS (Global Infrastructure Services).

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1.2.1 Definitions:

Technical Architecture covers the Infrastructure which includes the supporting hardware, software, middleware and networks for the application. It only exists to support the application programs.

The Application is a self contained program or suite of programs that perform specific functions directly for the user.

1.3 Relationship to Other Documents

The following documents will be produced to define the systems architecture for the Solution Definition Document (Release 1).
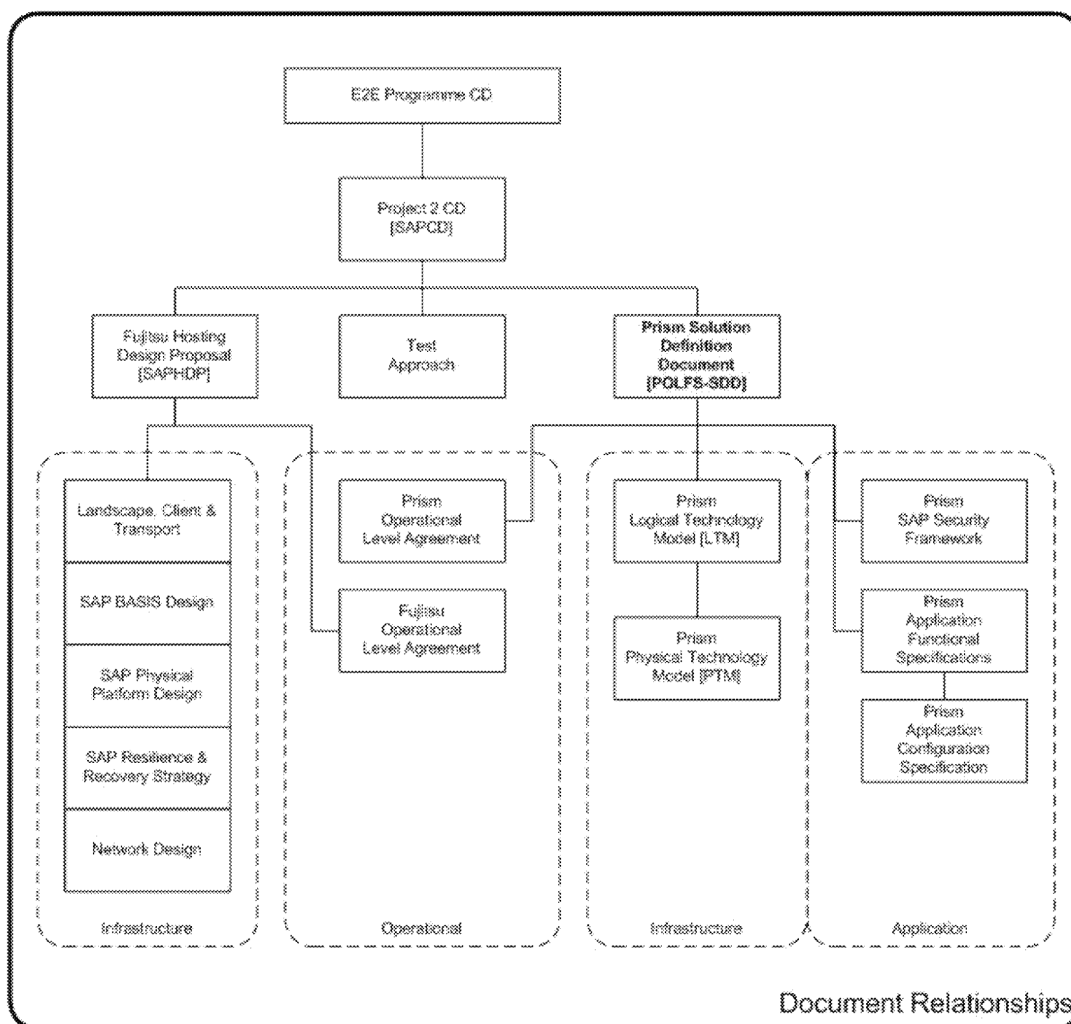
Figure 1 : Document Relationships

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1.3.1 Project Responsibilities

The project has already in place a Project Conceptual Design Document [SAPCD] that defines functional and non-functional requirements for release 1.

1.3.2 Fujitsu Services Responsibilities

Fujitsu Services are currently drafting a SAP Hosting Design Proposal document [SAPHDP] that will define the application hosting of POL FS.

1.3.3 Prism Responsibilities

This document is the Prism Solution Definition document [POLFS-SDD].
Building on this various other documents will be produced:

1.3.3.1 GIS Responsibilities:

- Statement of Work.
- Technology Direction Model.
- Conceptual Technology Model.
- Logical Technology Model.
- Physical Technology Model.
- Physical Build Specification Report.

1.3.3.2 Xansa Responsibilities:

- SAP Security Framework
- SAP Application Functional Specifications
- SAP Application Configuration Specification

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1.4 Terms and Abbreviations

Term/Abbreviation	Description
AED	Architecture Engagement Document
AIX	IBM version of Unix
CoE	Centre of Excellence
CSC	Computer Science Corporation
DCeS	Distributed and Collaborative e-Infrastructure Services
DR	Disaster Recovery
EDC	Enterprise Development Centre
GIS	Global Infrastructure Services
HDS	Hitachi Data Systems
Horizon	Horizon is the end-to-end solution that provides Post Office Ltd with a range of counter services.
Hrs	Hours
IAG	Integrated Architecture Group
IT	Information Technology
LoS	Line of Service
LTM	Logical Technology Model
N/A	Not Available/Applicable
NDC	Prism Northern Data Centre
NT	Version of Microsoft Windows
NT	A version of Microsoft Windows
POL	Post Office Ltd
POL FS	The finance system for Post Office Ltd
PTM	Physical Technology Model
RMG	Royal Mail Group
S60 / S80	System release of Horizon
SLA	Service Level Agreement
SQL	A Microsoft Database
STK	Storage Technology Services
TA	Technical Architecture
TAA	Technology Alternatives Assessment
TAR	Travel Authorisation Request
TDiM	Technology Diagnostics Model
TSI	Royal Mail Technology Services & Innovation
WBS	Work Breakdown Structure

Other generic IT terms can be looked up at: http://www.whatis.com/

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1.5 References

1.5.1 Associated & Reference Documents

Document Title	Author	Date	Version
Component & Usage Guidelines	TSI	N/A	6
[SAPCD] POL/E2E/DES/005 Automated Cash Bank Ledgers Project 2 - Release 1 Conceptual Design	Post Office	14 Jan 2004	2.0
[SAPHDP] E2E Project 2 Release 1 Design Proposal (SAP Hosting)	Nial Finnegan Fujitsu Services	8 Dec 2003	0.2
[POLFS-TOPRT] POL SAP Finance System Technical Options - Printing	Mark Cannon Prism	2 Dec 2003	B
[POLFS-TOPRES] POL SAP Finance System Technical Options – Presentation	Mark Cannon Prism	12 Feb 2004	D
[POLFS-SEC] POL SAP Finance System SAP Security Framework	Sally Price Prism	TBA	Draft
IMPACT PROGRAMME BANKING GATEWAYS UPGRADE	Rob Bradshaw Prism		0.1

Table 3: Source Documents

1.5.2 Contributors

Name	Job Title / Company	Contact Details
Richard Hopewell	SAP Technical Specialist / Prism	rhopewell2[GRO]
Roger Stevenson	Head of SAP TCE / Prism	rstevenson[GRO]
Penny Maguire	SAP Consultant / Prism (Release 1 Application Lead)	penny.maguire[GRO]

Table 4: Contributors

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2 Management Summary

2.1 Overview of Business Requirements

Post Office Ltd (POL) has been working with Fujitsu Services and the Prism Alliance to examine ways of streamlining their business processes and systems. This initiative, the IMPACT Programme (initially called "End-to-End Re-architecture"), has been broken down into various projects. The POL Finance Systems concentrates on replacing various legacy accounting solutions with a single, standard, package solution.

The key requirement of this project is to be able to consolidate all cash and near cash in Post Office Ltd. This includes physical cash at branches, cash centres and in transit; near cash at branches and in clear process; and balances in the relevant bank accounts. Further details can be found in the Conceptual Design [SAPCD].

2.2 Proposed Solution

The proposed solution is to deploy SAP R/3:
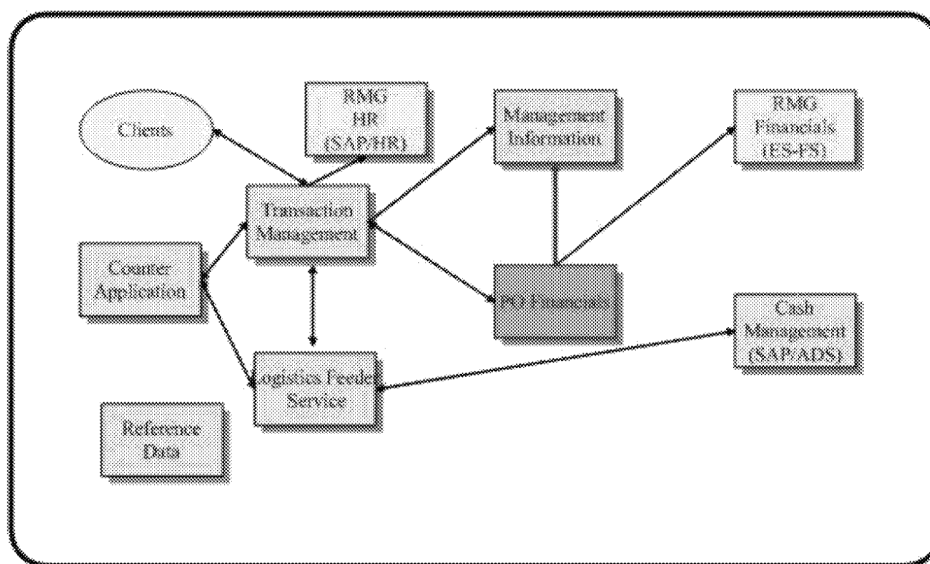
Figure 2 : Proposed Solution (End State)

The information presented in this document includes:

- A description of the proposed solution

- The general approach and direction for the solution's application and information architectures

- An initial view of the architectural components and system services required when implementing the solution.

The Solutions Architecture described in this document was derived from the principles, constraints and assumptions declared in the "RMG Applications Architecture portfolio".

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3 Current Systems Overview

Not in scope for this document.

This section will be expanded for Release 3 to include more detail of the systems being replaced.

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4   Business Requirements

4.1   Background & Context

Post Office Ltd has been working with Fujitsu Services and the Prism Alliance to examine ways of streamlining their business processes and systems. This initiative, the IMPACT Programme (initially called "End-to-End Re-architecture"), has been broken down into various projects. The SAP Finance Systems concentrates on replacing various legacy accounting solutions with a single, standard, package solution (SAP R/3).

4.2   Major Business Requirements

The key requirement of this project is to be able to consolidate all cash and near cash in Post Office Ltd. This includes physical cash at branches, cash centres and in transit; near cash at branches and in clear process; and balances in the relevant bank accounts. Further details can be found in the Conceptual Design [SAPCD].

4.2.1   Business Process Model

Business process maps and descriptions are detailed in [SAPCD].
In summary these are:
- A4 - Accounts & Settlement
- A43 - Summarise Transaction Data
- A48 - Produce POL Ledger
- A485 - Produce Cash & Bank Ledger
- A4851 - Bank Accounting
- A4852 - General Ledger Processing
- A6 - Cash Management
- A61 - Branch Cash Management
- A63 Branch Central Cash Management

4.2.2   Location Model

Release 1 user profiles are shown below:

Location	Description	Number	Type	Concurrency
80OS	80 Old Street, London	25	Heavy / Professional	20%
FW	Future Walk, Chesterfield	25	Heavy / Professional	20%
Client requirement of 50 named users assumed to be split evenly across sites. Assumed to be heavy/professional users				

For information only at this stage, release 3 user profiles are understood to be:

Location	Description	Number	Type	Concurrency
80OS	80 Old Street, London	175	Heavy / Professional	20%
FW	Future Walk, Chesterfield	175	Heavy / Professional	20%
Client requirement of 350 named users assumed to be split evenly across sites. Assumed to be heavy/professional users				

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4.2.3 Non-Functional Requirements

The below requirements are compiled from the various reference documents that already exist on this project:

4.2.3.1 System Resilience

The system should be sufficiently resilient to deliver the required availability.

4.2.3.2 Performance Requirements

Fujitsu Services propose to use SAP Solution Manager to track a sample set of transactions.
Standard SAP reports will then be run at the end of the service level reporting period and details fed into the Service Level Reports.
The service level target is for 95% of the agreed transactions to be completed within:
        "1.5 - <WAN latency>" seconds.
Where this measure is taken within the hosting environment (excluding WAN and presentation layers).

Of the overall transaction time, the response target for time spent in the Prism domain is 0.5 seconds. It is currently unclear how this could be proven absolutely in a case of dispute.

4.2.3.3 Backup

All components should be backed up to ensure recoverability to the previous day in case of failure.

4.2.3.4 Archiving

To be detailed in Release 3.

4.2.3.5 Service Hours/SLA

The availability of the online SAP service is to be measured between 07:30-19:30 on Monday-Friday (excl. Bank Holidays).
The service will be measured in 2 parts:
- the host service
- end-to-end service

Host Service (Fujitsu Services Responsibility)
The host service is defined as being available if the SAP host system is available to be logged into and there are no overnight data load jobs still processing.
- The target availability is to be 98.5% (this equates to an average of 4 hours outage per month)
- The maximum downtime permitted during a single outage is 4 hours.
- This service level target is to be measured over a period of 1 quarter
- Although the service is not measured at the weekends or bank holidays, it is expected that the service should be available 7 days per week (07:30-19:30), except by agreement. The windows between 19:30 to 07:30 is available for batch processing
- Support for the Service should be available during the hours of service measurement i.e. 07:30-19:30 Mon-Fri (excl. Bank Holidays)
- It is expected that the host service should be monitored using standard SAP functionality and that the reporting should fit in within the reporting framework for Horizon.

Client/Network Service
The client/network service is defined as the SAP client and the associated local area networking to reach access to the service boundary[1] at the Prism Data Centre.

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[1] The service boundary will be defined during contractual discussions

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4.2.3.6   Availability

The availability requirements for the live SAP host are:
- The target availability is to be 98.5% (this equates to an average of 4 hours outage per month)
- The maximum downtime permitted during a single outage is 4 hours.
- This service level target is to be measured over a period of 1 quarter
- Although the service is not measured at the weekends or bank holidays, it is expected that the service should be available 7 days per week (07:30-19:30), except by agreement. The windows between 19:30 to 07:30 is available for batch processing

4.2.3.7   Key Times

TBA

4.2.3.8   Support

Helpdesk support for POL FS will need to be agreed, and where necessary links between all three systems[1] for Helpdesk support should be established.

4.2.3.9   Business Continuity Requirements

There must be contingency arrangements in place for the POL FS service.
The maximum outage during failover is 1 week.
At the end of failover the data must be fully restored, but the system can run with a reduced service in terms of:
- the number of supported users
- end-user response times
- the time by which data loads have to be complete

4.2.3.10 Extensibility/Scalability/Maintainability/Manageability

The solution should be scalable to allow future growth.

4.2.3.11 Security

POL are currently undertaking a security review to categorise the importance and security level to be applied to this solution and the data it contains.

4.2.3.12 Volumes

Peak day figures are:

Source	Contracted Volume Documents	Contracted Volume line items
Horizon	17000 - 18000	180,000
SAP ADS	20	36,000
Bank Statements	600	1200
Clearing Transactions*	100,000	0
Other Manual	100	200

* Clearing transactions in SAP GL do not create new line items but do create a header document.

4.2.3.13 Growth Rates

TBA

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[1] This requirement is taken from the Project CD and the "three systems" are understood to mean POLFS, ADS & Horizon.

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4.2.3.14 Non-Productive Environments

Four non-productive environments are required:
- Development
- Prism Test
- Fujitsu Operational Test
- POL User Acceptance Test

4.2.3.15 Printing Requirements

Given the shared nature of the infrastructure, specific requirements in the area of printing have been gathered.

- ◆ Number / Location / Type:
  - A ratio of 8:1 (users to printers) for the operational service is expected.
  - All printers to be used are currently on-site.
  - They are "SAP Standard Printers" as defined in SAP.
  - They are accessible via IP printing.
  - Colour printing is not required.

- ◆ Reports:

Report Length	Size	Overhead	Assumed no./user/day	Size / User / Day
1 page report	10K	4 Times	10	400K
10 page report	100K	2½ Times	10	2500K
100 page report	1000K	2½ Times	1	2500K

Information based on tests executed by the SAP TCE showed

3 page average content -	28k
4 page average content -	28k
1 page high content	-	45k
10 page high content	-	450k

This would suggest that average content per page would be approx 10k rather than the originally estimated 5k and so the above figures were revised to reflect this.

- ◆ Security:
  - No printed output requires encryption.

- ◆ Availability:
  - As per service (detailed in section 4.2.3.6 - Availability)

- ◆ Print Loss:
  - No requirement to ensure automated recovery of print data. In the event of a print service failure, it is assumed the end-user would re-send any print request.

5 Solution Architecture Overview

5.1 Architecture Overview
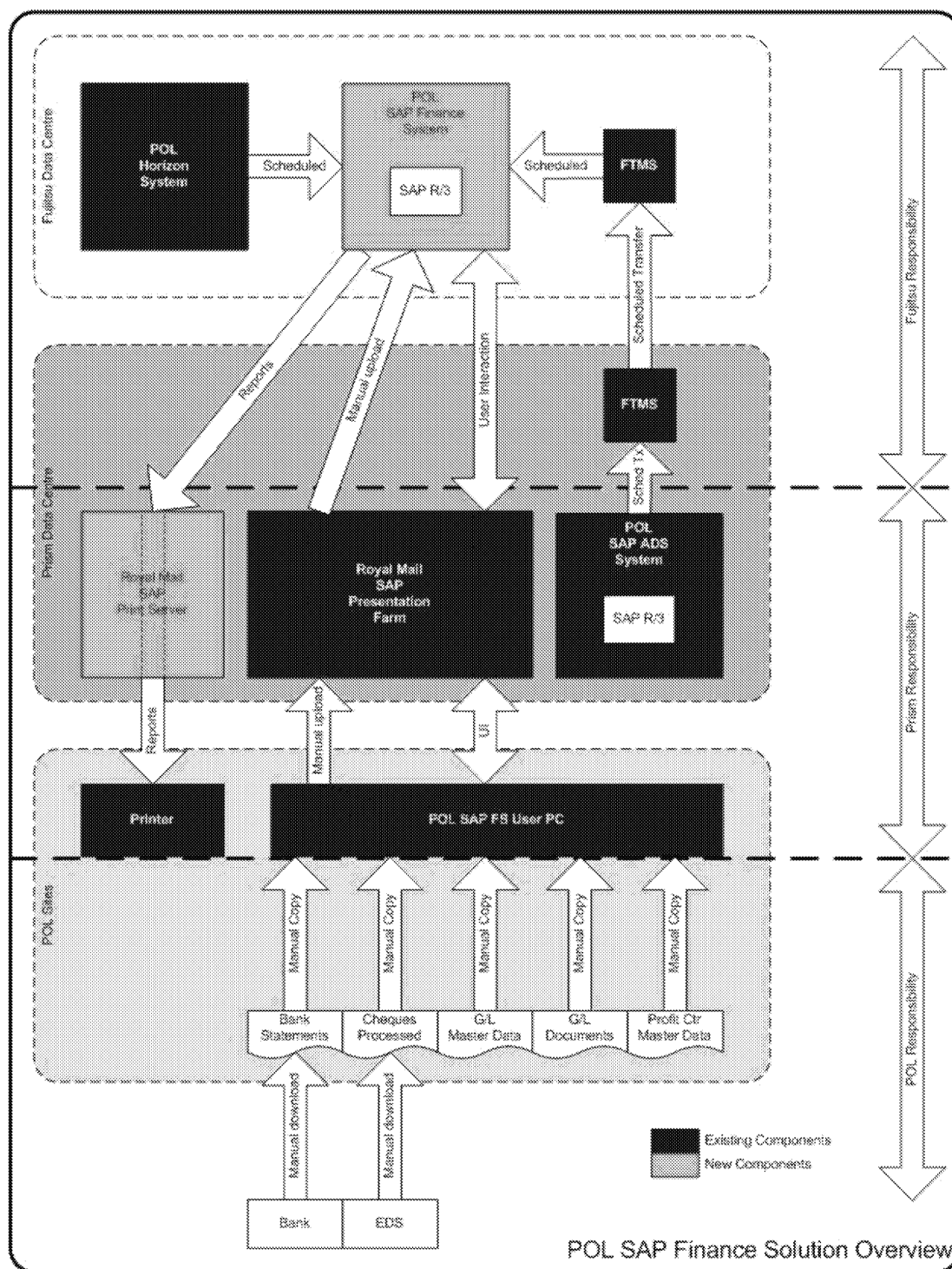
Figure 3 : Architecture Overview

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5.2 Summary of Design Constraints

Ref	Constraint	Impact	Action
1	SAP Application & Database will be hosted by Fujitsu		

<div align="right">Table 5: Design Constraints</div>

5.3 Summary of Design Givens

Ref	Givens
CB008	POL FS will be built as a new SAP system

<div align="right">Table 6: Design Givens</div>

5.4 Summary of Design Principles

There were a number of design principles laid out in [SAPCD]. The ones relevant to this design are as follows:

Ref	Principle
CB021	One of the principles for the POL FS project is to put the SAP system within the "Horizon domain" to minimise issues of interfacing between Horizon and the new POL FS system.
CB022	The intention is to set reasonable service level targets, with reasonable compensation for failure to meet the service. (The definition of reasonable will be determined during the contractual negotiations)
CB023	The new POL FS system should (wherever possible) fit in with existing processes and management systems.
CB024	The SAP installation should be a "vanilla " installation, except for the bespoke interfaces required to load data from Horizon and SAP ADS

<div align="right">Table 7: Design Principles</div>

5.5 Summary of Design Assumptions

Ref	Assumption	Criticality (H/M/L)
1	All users will be accessing the systems using PCs with the Royal Mail standard Platform 2000 image installed on them.	H
2	Client requirement of 50 named users assumed to be split evenly across 2 sites.	H
3	Assumed to be heavy/professional users.	H

<div align="right">Table 8: Design Assumptions</div>

5.6 Summary of Design Dependencies

This design is dependant upon the Fujitsu Services Hosting design document [SAPHDP]

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5.7 Summary of Design Alternatives

5.7.1 Printing

Alternate options for printing were considered and are documented in [POLFS-TOPRT].
In summary there were four options:

    Option 1: Print Directly to Printer
    Option 2: Local Print Server
    Option 3: Central Print Server
    Option 4: User Printing

The POL Design authority accepted option 3.
For further information please refer to the technical options document (Appendix B – Printing Options).

5.7.2 Presentation

Alternate options for presentation were considered and are documented in [POLFS-TOPRES].
In summary there were four options:

    Option 1: WorkPlace 2.11 & ITS 610
    Option 2: ITS 610 Only
    Option 3: ITS 620 Only
    Option 4: Enterprise Portal 6 & ITS 620

The POL Design authority requested option 1.
For further information please refer to the technical options document (Appendix C – Presentation Options).

6 Application Architecture

6.1 Architecture Model Overview

This SAP solution will be deployed in the following n-tier model:

6.1.1 Client

Clients will access the solution via the standard Royal Mail Platform 2000 desktop image through the web browser. They will print to standard printers already deployed.
The client access and printing layer is the responsibility of Prism.

6.1.2 Presentation

The SAP presentation layer will be rendered via the standard Royal Mail presentation farm using SAP portal and web presentation technologies.
The presentation layer is the responsibility of Prism.

6.1.3 Application

The application layer is the responsibility of Fujitsu Services.

6.1.4 Database

The database layer is the responsibility of Fujitsu Services.

6.2 Application Structure Diagram

Please refer to the Architecture Overview diagram in section 5.1

6.3 Application Landscape

This SAP solution will be deployed using the following logical landscape:
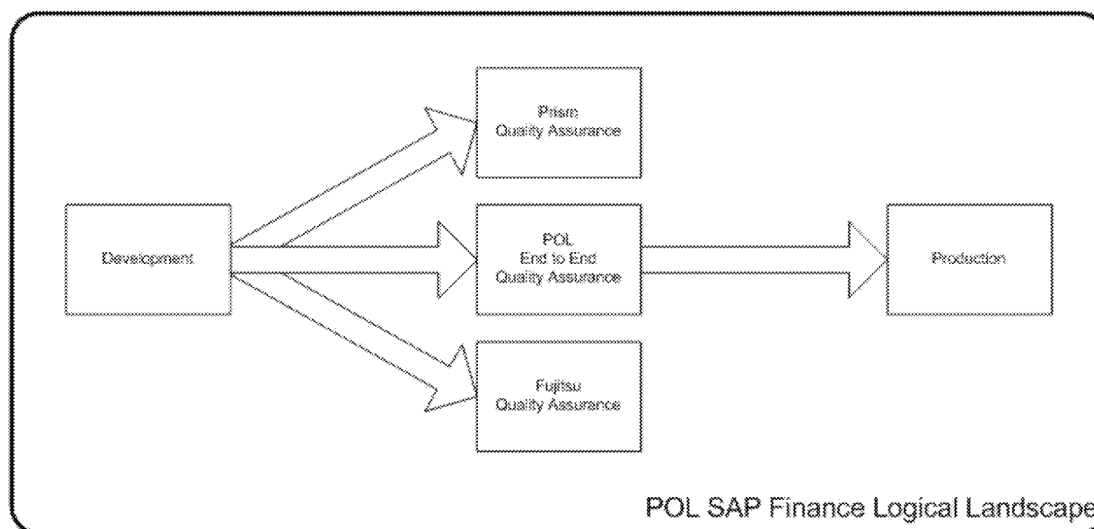
Figure 4 : Logical Landscape

The detailed landscape, client configuration and transport management approach will be documented by Fujitsu.

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6.4 Application Design Approaches

This section details agreed, specific approaches to the application design.

6.4.1 Demarcation

Application configuration/ development will be split between technology and business, with the application technology layer (ie platform & application) being the responsibility of Fujitsu and the application business layer (ie business process execution) being the responsibility of Prism.

6.4.2 Co-operative Processing

Being a solution that is delivered by a standard package, it has its own approach to co-operative processing that will be used internally and is in the Fujitsu domain of responsibility.

6.4.3 Concurrency Design

Being a solution that is delivered by a standard package, it has its own approach to managing concurrency that is implemented internally. To support future growth in concurrency, it will be designed to scale.

6.4.4 User Authentication & Access Control

Standard SAP user security will be utilised.
The standard SAP Central User Administration (as currently installed in the Prism NDC) will be leveraged and control user maintenance in all environments.
Fujitsu will supply details of the users / profiles / roles they require.
Prism will manage all user / profile / role maintenance in line with the current SAP Operating Standards.

6.4.5 Data Encryption

Until POL advise differently, the current working assumption is that application level encryption is not required.

6.5 Sub-systems Catalogue

This section provides only a brief summary of each application sub-systems that makes up the solution. A more detailed definition will be presented in the physical application model.

6.5.1 Release 1

Sub-system	Description	Processing Node	Functions
HORIZON	POL Horizon	Existing System	Supplies daily cash data
SAPADS	POL SAP ADS	Existing System	Supplies daily cash data
EDSCP	EDS Cheques Processed	External System File arrives on Client PC	Supplies cheques processed data
BANK[1]	Bank Statements	External System Data will be manually re-keyed for Release 1.	Bank statement data
FTMS	File Transfer	Existing Component Fujitsu responsibility	Move files from Prism domain to Fujitsu domain
POLFS	POL SAP Finance System SAP R/3 4.7	POLFSA / POLFSD SAP Application / Database Servers In Fujitsu domain	New Finance system to meet business requirements.
RMSAPPF	Royal Mail SAP Presentation Farm	RMSAPPF SAP Presentation Farm In Prism Domain	Provides SAP UI via a web interface Facilitates file uploads from user client to POLFS
RMSAPPS	Royal Mail SAP Print Server	RMSAPPS SAP Print Server In Prism Domain	Provides bridge between POLFS in Fujitsu Domain and printers in Prism domain to deliver printing
CLIENT	POLFS Clients	Client PC	e.g. Manual Data Entry

Table 9: Sub-system Catalogue – Release 1

6.5.2 Release 3

As above plus:

Sub-system	Description	Processing Node	Functions
BANK	Bank Statements	External System File arrives on Client PC	Supplies bank statement data

Table 10: Sub-system Catalogue – Release 3

Further details will be added when this document is updated to show all of Release 3.

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[1] Note change to manual input for Release 1 – See Appendix A – Amendment & Change Log.

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6.5.3 Sub-system/Function Cross-reference (Release 1)

	Horizon	SAPADS	EDSCP	BANK	FTMS	POLFS	RMSAPPF	RMSAPPS	CLIENT
A4 - Accounts & Settlement	✓	✓			✓	✓	✓	✓	✓
A43 - Summarise Transaction Data	✓	✓			✓	✓	✓	✓	✓
A48 - Produce POL Ledger			✓	✓		✓	✓	✓	✓
A485 - Produce Cash & Bank Ledger			✓	✓		✓	✓	✓	✓
A4851 - Bank Accounting			✓	✓		✓	✓	✓	✓
A4852 - General Ledger Processing						✓	✓	✓	✓
A6 - Cash Management	✓	✓			✓	✓	✓	✓	✓
A61 - Branch Cash Management	✓	✓			✓	✓	✓	✓	✓
A63 Branch Central Cash Management	✓	✓			✓	✓	✓	✓	✓

Table 11: Sub-system/Function Cross-reference

Note: Although the process diagrams in SAPCD show interfaces to ES-FS and SAP-HR, these do not come into play until POLFS Release 3.

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6.5.4 Sub-system Structures/Diagrams

Please refer to the Architecture Overview diagram in section 5.1
Details for the new sub-systems or sub-systems specifically relevant are detailed below:

6.5.5 EDSCP

Details of Cheques Processed will be uploaded manually, by an end user, from an external system.

6.5.6 BANK[1]

The Bank Statements will be entered manually, by an end user, from an external system.

6.5.7 POLFS

The POL Finance System application is the responsibility of Fujitsu Services. It will be
- SAP R/3 v4/7x110 probably running on Unix for R1 and Windows 2000 Server for R3.

6.5.8 RMSAPPF

The SAP Presentation layer will be running:
- SAP Workplace (WP) v2.11 on Unix
- SAP Internet Transaction Server (ITS) v6.10 on Windows 2000 Server
- Citrix Metaframe (Citrix) v1.8 on Windows 2000 Server

6.5.9 RMSAPPS

The SAP Print Server will be running:
- The standard Unix LPD print server service.

6.5.10 CLIENT

The client will be running the Royal Mail standard "Platform 2000" image, which specifically includes:
- Windows 2000
- IE5.5 (Soon to be upgraded to IE6)
- Citrix ICA Client

6.5.11 Sub-system Flow Diagrams

Please refer to the Architecture Overview diagram in section 5.1

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[1] Note change to manual input for Release 1 – See Appendix A – Amendment & Change Log.

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6.6 Interface Catalogue

6.6.1 Data Initialisation Interfaces

The table below outlines the data flows required to migrate data from other systems:

Supplying System	Data Content	Comments
Manual XLS / CSV	G/L Master Data Load	Initial load to create G/L accounts
Manual XLS / CSV	G/L Document Data Load	Initial load to G/L opening balances
Manual XLS / CSV	Profit Centre Data Load	Initial load to create Profit Centres

Table 12: Data Initialisation Interfaces

6.6.2 Production Data Interfaces

The table below outlines the data flows required to integrate with other systems:

Name	From	To	Data Content	Description
Daily Cash & Near Cash from Horizon	HORIZON	POLFS	Daily Cash, Near Cash	Cash movement figures from each branch
Daily Cash, Near Cash & from SAP ADS	SAPADS	POLFS	Daily Cash, Near Cash, Cash Centre Bank Accounts	Cash movement figures from each cash centre
Cheques Processed from EDS	EDS	POLFS	Cheques processed, Total value banked	Cheques processed for previous day by EDS
Bank Statements[1]	BANK	POLFS	Opening balance Receipts Payments Closing balance	Bank statement for each bank account involving client related funds
G/L Master Data Load	Manual XLS / CSV	POLFS	G/L Accounts	Initial load process may be used in production on an ad-hoc basis if bulk changes are required.
G/L Document Data Load	Manual XLS / CSV	POLFS	G/L Documents	Initial load process may be used in production on an ad-hoc basis if bulk adjustments are required.
Profit Centre Data Load	Manual XLS / CSV	POLFS	Profit Centres	Initial load process may be used in production on an ad-hoc basis if bulk changes are required.

Table 13: Production Data Interfaces

6.6.3 System Services Interfaces

The table below outlines the data flows required to integrate with system service components

Sub-system From	Sub-system To	Data Content	Comments
Table currently empty as no automated system interfaces required in Release 1.			

Table 14: Sub-system Interfaces

---

[1] Note change to manual input for Release 1 – See Appendix A – Amendment & Change Log.

6.7 Interface Details

This section provides detail on each interface in the interface catalogue. Details include:

1. Name	Name of the interface
2. Direction:	Indicate the direction of the data flow. (Sys1 to Sys2) Protocol information about the operation of the interface is not data in this context.
3. Data Type	E.g. Graphics, text, numeric, voice, binary, etc.
4. Type	E.g. Procedure Call (synchronous), Message Queue (asynchronous), File (batch), Data Conversion (i.e. Sequential File via a conversion tool or bridge).
5. Response Time	E.g. 1 day or more, 1 to 24 hours, 1 to 59 minutes, 4 to 59 seconds, e seconds or less. - Be as specific as possible to enable Acceptance Criteria to be defined. (This may already have been defined in Section 4, Performance Metrics.)
6. Retention	How long the data accessed is held, e.g. years, months, days, 1 to 24 hours, 1 to 59 minutes, 4 to 59 seconds, 3 seconds or less.
7. Currency	How up to date the data accessed must be, e.g. 1 day or more, 1 to 24 hours, 1 to 59 minutes, 4 to 59 seconds, 3 seconds or less.
8. Recoverability	Transactional, Non-transactional, Batch restart on failure.
9. Scope of Access	Read Only, Read/Write, Write Only.
10. Usage Period	Period when the interface is used, e.g. annually, quarterly, monthly, weekly, daily, continually, data initialisation, ad hoc. Be as specific as you can.
11. Availability (during Period)	E.g. 99% during office hours, 99.5% during the month end period of 3*24 hours.
12. Frequency	No of accesses within period, e.g. >1000, 500-1000, 100-500, 50-100, 5-50, <5. Please be as specific as possible to enable Acceptance Criteria to be defined.
	An Initialisation interface may be used once, or more, depending on the retirement strategy.
13. Volume	Volume of data transferred in each access, e.g. single record, single table, database.
14. Accuracy	The error tolerance on data, e.g. 50%, 11 to 49%, 6 to 10%, 1 to 5%, none. Please be specific.
15. Security	Any requirement for a service connected to/data access, to run under the security context of the client process, levels of general access, confidential, sensitive.
16. Criticality	Impact of failure, e.g. None, Minor, Significant, Unable to function, Business critical.
17. Audit	Requirement for audit logging of the interface, if any.
18. Longevity	For legacy interfaces: For how long is this interface needed, e.g. until legacy replaced in Release 4.
19. Operation	Automatically invoked; i.e. invoked by the application as part of the functionality, user is unaware of the interface.
	Manually invoked; means that the user has explicitly requested data to be transferred via this interface.
20. Transfer Medium	For batch interfaces. Can be Magnetic Tape, LAN/Wan connection, etc.
21. Data Elements	This is the function call signature, message definition or file definition.
22. Degree of Translation	None, field-to-field, complex derivation.
23. Scaleability	E.g. the next release may introduce a new interface, or may require an existing interface to handle much greater volumes of data.
24. Legacy Change	Description and Estimate in Enhancement function points for change required to Legacy System
25. State of Legacy Data	What is the current state of the legacy data? Is it good enough to be migrated as it is, or does it need 'cleansing' prior to migration?
26. Other	Any complex interface rules such as data conversion rules.

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6.7.1 Data Initialisation Interfaces

6.7.1.1 G/L Master Data Load

Attribute	Description
Name	G/L Master Data Load
Direction	PC to POLFS
Data Type	Text
Interface Type	Batch File
Response Time	
Retention	Data held in POLFS forever / as long as master data is valid
Currency	Data current at time of load.
Recoverability	Manually remove / correct
Scope of Access	File Read Only & SAP Read/Write
Usage Period	One off & Future large batch changes
Availability during period	One off & Future large batch changes
Frequency	One off & Future large batch changes
Volume	Approx. 40 Accounts, 462 Bytes per account ~ 18KB
Accuracy	No error tolerance on data
Security	Specific Users via SAP Security
Criticality	Fallback is to enter manually
Audit	SAP standard audit facilities
Longevity	One off & Future large batch changes
Operation	Manual
Transfer Medium	Network
Data elements	File definition to be detailed separately
Degree of Translation	Load routine to be defined & written in SAP (Prism)
Scaleability	Will need to handle more accounts in future phases – details TBA
Legacy Change	
State of Legacy Data	No legacy data will be loaded
Other	n/a

6.7.1.2 G/L Document Data Load

Attribute	Description
Name	G/L Document Data Load
Direction	PC to POLFS
Data Type	Text
Interface Type	Batch File
Response Time	
Retention	Data held in POLFS forever / archiving requirements TBA
Currency	Data current at time of load.
Recoverability	Manually remove / correct
Scope of Access	File Read Only & SAP Read/Write
Usage Period	One off & Future large batch changes
Availability during period	One off & Future large batch changes
Frequency	One off & Future large batch changes
Volume	Approx. 20,000 Headers @ 80 bytes, 80,000 Transactions, @ 120 =~ 11MB
Accuracy	No error tolerance on data
Security	Specific Users via SAP Security
Criticality	Fallback is to enter manually
Audit	SAP standard audit facilities
Longevity	One off & Future multiple adjustments (probably at period end)
Operation	Manual
Transfer Medium	Network
Data elements	File definition to be detailed separately
Degree of Translation	Load routine to be defined & written in SAP (Prism)
Scaleability	TBA
Legacy Change	
State of Legacy Data	No legacy data will be loaded
Other	n/a

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6.7.1.3   Profit Centre Master Data Load

Attribute	Description
Name	Profit Centre Master Data Load
Direction	PC to POLFS
Data Type	Text
Interface Type	Batch File
Response Time	
Retention	Data held in POLFS forever / as long as master data is valid
Currency	Data current at time of load.
Recoverability	Manually remove / correct
Scope of Access	File Read Only & SAP Read/Write
Usage Period	One off & Future large batch changes
Availability during period	One off & Future large batch changes
Frequency	One off & Future large batch changes
Volume	Approx. 20,000 @ 320 bytes =~ 6.5MB
Accuracy	No error tolerance on data
Security	Specific Users via SAP Security
Criticality	Fallback is to enter manually
Audit	SAP standard audit facilities
Longevity	One off & Future large batch changes
Operation	Manual
Transfer Medium	Network
Data elements	File definition to be detailed separately
Degree of Translation	Load routine to be defined & written in SAP (Prism)
Scaleability	Will need to handle more in future phases – details TBA
Legacy Change	
State of Legacy Data	No legacy data will be loaded
Other	n/a

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6.7.2 Production Data Interfaces

6.7.2.1 Daily Cash & Near Cash from Horizon

Attribute	Description
Name	Daily Cash & Near Cash from Horizon
Direction	HORIZON to POLFS
Data Type	Text
Interface Type	Batch File
Response Time	
Retention	Data held in POLFS for TBA
Currency	Data received is for previous trading day
Recoverability	Files are validated & SAP batches created. On processing batch SAP FI documents are created. If some / all of files file fail validation then error file sent back to source & correction file received. Validated data creates batch sessions. If batch is not created the interface can be re-run. If batch is created & fails, batch can be re-started manually. SAP then only considers documents that have previously failed in the batch
Scope of Access	File Read Only & SAP Read/Write
Usage Period	Daily – 365 day per year
Availability during period	File to be received by 3:00 and processed by 7:30 on day B (where day A = trading day)
Frequency	Once per day
Volume	Release 1: 64 Files + EOT (End Of Transmission) File per day. Approx 1KB per outlet = Approx 17MB per day Release 2: Up to 2GB per day
Accuracy	No error tolerance on data
Security	SAP user based security – Run overnight and so only support staff can access on failure.
Criticality	Significant
Audit	Standard SAP auditing
Longevity	Ongoing
Operation	Automatically scheduled (Fujitsu)
Transfer Medium	Copy over LAN in Fujitsu Data Centre (Fujitsu)
Data elements	File definition to be detailed separately
Degree of Translation	Load routine to be defined & written in SAP (Prism)
Scaleability	See volumes for Relase 2
Legacy Change	
State of Legacy Data	No legacy data will be loaded
Other	n/a

6.7.2.2 Daily Cash from SAP ADS

Attribute	Description
Name	Daily Cash & Near Cash from SAP ADS
Direction	SAPADS to POLFS
Data Type	Text
Interface Type	Batch File
Response Time	
Retention	Data held in POLFS for TBA
Currency	Data received is for previous trading day
Recoverability	Files are validated & SAP batches created. On processing batch SAP FI documents are created. If some / all of files file fail validation then error file sent back to source & correction file received. Validated data creates batch sessions. If batch is not created the interface can be re-run. If batch is created & fails, batch can be re-started manually. SAP then only considers documents that have previously failed in the batch
Scope of Access	File Read Only & SAP Read/Write
Usage Period	TBA - Daily – 365 day per year?
Availability during period	File to be received by 3:00 and processed by 7:30 on day B (where day A = trading day)
Frequency	Once per day
Volume	Release 1: 1 File per day. Approx 20,000 rows @ 42 bytes =~820KB Release 2: TBA
Accuracy	No error tolerance on data
Security	SAP user based security – Run overnight and so only support staff can access on failure.
Criticality	Significant
Audit	Standard SAP auditing
Longevity	Ongoing
Operation	Automatically scheduled (Fujitsu & Prism)
Transfer Medium	Via FTMS from Prism Data Centre to Fujitsu Data Centre (Fujitsu & Prism)
Data elements	File definition to be detailed separately
Degree of Translation	Load routine to be defined & written in SAP (Prism)
Scaleability	TBA
Legacy Change	
State of Legacy Data	No legacy data will be loaded
Other	n/a

6.7.2.3 Cheques Processed from EDS

Attribute	Description
Name	Cheques Process from EDS
Direction	EDS to POLFS
Data Type	XLS
Interface Type	Batch File
Response Time	
Retention	Data held in POLFS for TBA
Currency	Data received is for previous day
Recoverability	TBA Export from EDS can be recollected?
Scope of Access	File Read Only & SAP Read/Write
Usage Period	TBA - Daily – 365 day per year?
Availability during period	File to be received by TBA and processed by 12:00 on day B (where day A = trading day)
Frequency	TBA – Once per day?
Volume	Three files (around 16-20MB)
Accuracy	No error tolerance on data
Security	SAP user based security to control access
Criticality	Significant, but not business ciritical
Audit	Standard SAP auditing
Longevity	Ongoing
Operation	Manual by an end user (POL)
Transfer Medium	Upload through SAP front end (Prism to deliver functionality)
Data elements	File definition to be detailed separately
Degree of Translation	Load routine to be defined & written in SAP (Prism)
Scaleability	TBA
Legacy Change	
State of Legacy Data	No legacy data will be loaded
Other	n/a

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6.7.2.4 Bank Statements

Note change to manual input for Release 1 – See Appendix A – Amendment & Change Log.

Attribute	Description
Name	Bank Statements
Direction	BANK to POLFS
Data Type	Text
Interface Type	Batch File
Response Time	
Retention	Data held in POLFS for TBA
Currency	Data received is for previous day
Recoverability	TBA Export from EDS can be recollected?
Scope of Access	File Read Only & SAP Read/Write
Usage Period	TBA - Daily – 365 day per year?
Availability during period	File to be received by TBA and processed by 12:00 on day B (where day A = trading day)
Frequency	TBA - Once per day?
Volume	Approx. 3 accounts / 12 entries @ 106 bytes =~4KB
Accuracy	No error tolerance on data
Security	SAP user based security to control access
Criticality	Significant, but not business ciritical
Audit	Standard SAP auditing
Longevity	Ongoing
Operation	Manual by an end user (POL)
Transfer Medium	Upload through SAP front end (Prism to deliver functionality)
Data elements	File definition to be detailed separately
Degree of Translation	Load routine to be defined & written in SAP (Prism)
Scaleability	TBA
Legacy Change	
State of Legacy Data	No legacy data will be loaded
Other	n/a

6.7.2.5 G/L Master Data Load

See Data Initialisation Interfaces.
When used in an ad-hoc manner, data volumes are likely to be less than initial load.

6.7.2.6 G/L Document Data Load

See Data Initialisation Interfaces.
When used in an ad-hoc manner, data volumes are likely to be less than initial load.

6.7.2.7 Profit Centre Master Data Load

See Data Initialisation Interfaces.
When used in an ad-hoc manner, data volumes are likely to be less than initial load.

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6.7.3 System Services Interfaces

6.7.3.1   System Services Interface Name 1 - TBA

Attribute	Description
Name	
Direction	
Data Type	
Interface Type	
Response Time	
Retention	
Currency	
Recoverability	
Scope of Access	
Usage Period	
Availability during period	
Frequency	
Volume	
Accuracy	
Security	
Criticality	
Audit	
Longevity	
Operation	
Transfer Medium	
Data elements	
Degree of Translation	
Scaleability	
Legacy Change	
State of Legacy Data	
Other	

6.8 Application Risks & Issues

The following risks have been identified for this application:

Ref	Description and Consequences	Probability (1 to 5[1])	Impact (H / M / L)
1	Workplace goes out of mainstream maintenance in June 2004. Standard SAP support for it would then not be available.	5	H

Table 15: Application Risk Log

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[1] Probability of 1 is low and 5 highly likely.

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7 Data Architecture

7.1 Entity/Relationship Diagram

Detailed Entity information is not included in this SDD as the solution being delivered is a package solution and its standard data constructs are being used.

7.2 Entity Definitions & Volumetrics

Detailed Entity information is not included in this SDD as the solution being delivered is a package solution and its standard data constructs are being used.

As entity volumetrics are used to size application and database layers and these are the responsibility of Fujitsu Services, these are not included in this document.

7.3 Relationship Definitions

Detailed Entity information is not included in this SDD as the solution being delivered is a package solution and its standard data constructs are being used.

7.4 Data Type / Element Definitions

Detailed data information is not included in this SDD as the solution being delivered is a package solution and its standard data constructs are being used.

7.5 Data Security / Resilience / Recoverability

As the data layer is this solution is the responsibility o Fujitsu Services, all security, resilience and recoverability aspects will be covered in their design documentation.

7.6 Data Archiving

As the data layer is this solution is the responsibility of Fujitsu Services, all data archiving aspects will be covered in their design documentation.

7.7 Data Risks and Issues

The following data risks have been identified for this solution:

Ref	Description and Consequences	Probability (1 to 5[1])	Impact (H / M / L)

Table 16: Data Risk Log

---

[1] Probability of 1 is low and 5 highly likely.

8 Technology Architecture
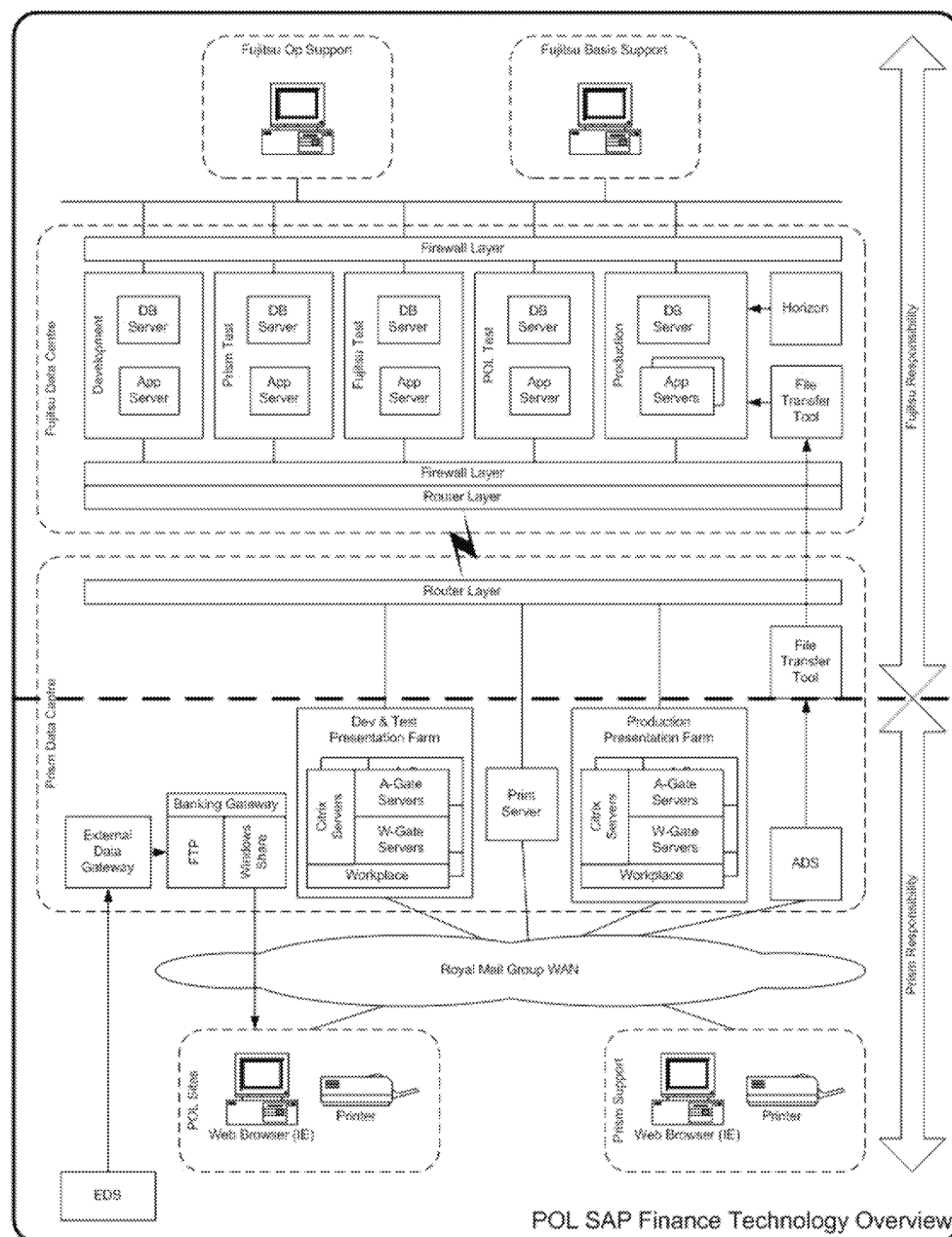
8.1 Technology Overview

Figure 5 : Technology Overview

Note: Details of technology in the Fujitsu domain is shown logically, the exact split of application & database instances and their location is available in their design document.

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8.2 Logical Technical Infrastructure

8.2.1 Logical Node Definition

Only nodes that are the responsibility of Prism are handled in detail in this document. For details of the Fujitsu technical infrastructure, please refer to [SAPHDP].

Node	Location Type	Locations	Hardware Platform	Operating System
CLIENT-80OS	POL Site	80 Old Street	Standard Platform 2000 Client	
CLIENT-FW	POL Site	Future Walk	Standard Platform 2000 Client	
RMSAPPF	Data Centre	Prism NDC	HP/Compaq	Windows 2000
RMSAPPS	Data Centre	Prism NDC	TBA	UNIX
POLFSA	Data Centre	Fujitsu DC	SUN	SOLARIS 9
EDS	External	External	External System	
EDG	Data Centre	Data Centre		
BGW	Data Centre	Data Centre		

Table 17: Logical Node Definition

Note: In Fujitsu release 1, the POLFS app & db nodes will be one in the same. In future releases Windows 2000 based application servers are being proposed.

8.2.2 Logical Link Definition

Link From	Link To	Description	Transmission Media
CLIENT-80S	RMSAPPF	Client to Presentation Farm	RM WAN (IP)
CLEINT-FW	RMSAPPF	Client to Presentation Farm	RM WAN (IP)
CLIENT-80S	RMSAPPS	Client to Print Server	RM WAN (IP)
CLEINT-FW	RMSAPPS	Client to Print Server	RM WAN (IP)
CLIENT-80S	BGW	Client to Banking Gateway	RM WAN (IP)
CLEINT-FW	BGW	Client to Banking Gateway	RM WAN (IP)
RMSAPPF	POLFSA	Presentation Farm to Application Server	Fujitsu Managed Link (IP)
RMSAPPS	POLFSA	Print Server to Application Server	Fujitsu Managed Link (IP)
EDS	EDG	EDS to External Data Gateway	TBA
EDG	BGW	External Data Gateway to Banking Gateway	PRISM NDC LAN

Table 18: Logical Link Definition

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8.2.3 Logical Technical Infrastructure Detail Diagrams

These will be further clarified in the LTM.

8.2.3.1 Cheques Processed Interface

The "Cheques Processed" interface will change overtime. At the start of this project, data was sent from Data Central to OPTIP and then onto CBDB:
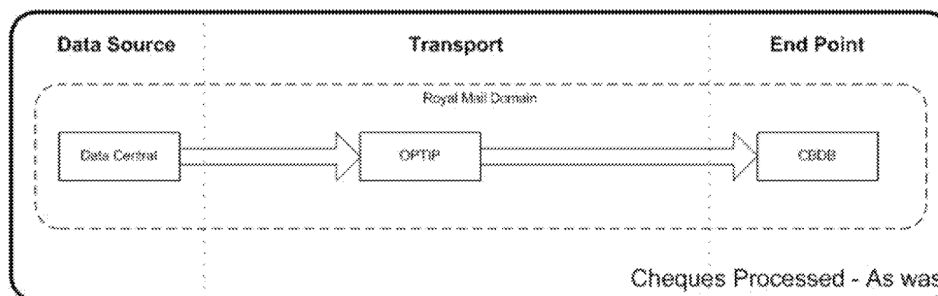

Figure 6 : Cheques Processed Interface – As was

Initially (for release 1 whilst both POLFS and CBDB are live), the cheques processed data file will be copied to the OPTIP server and the "Banking Gateway" servers[8], where a user can manually access them for manual upload to POLFS.
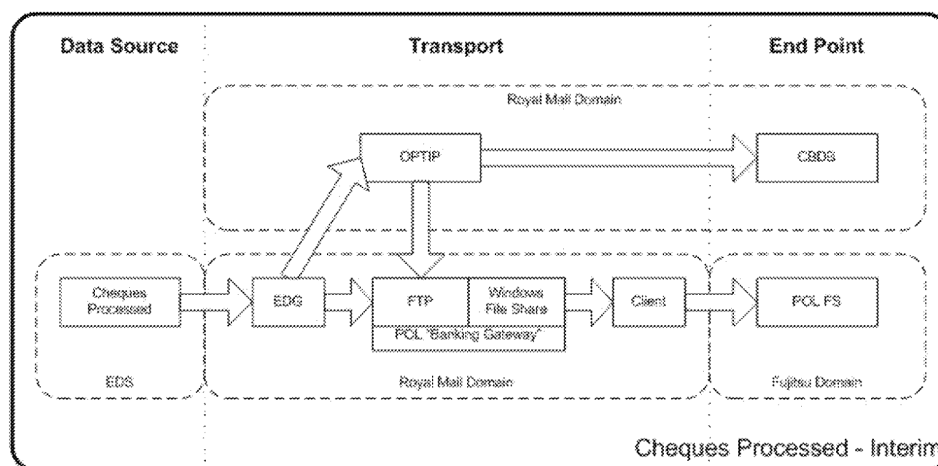

Figure 7 : Cheques Processed Interface - Interim

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[8] The POL "Banking Gateways" have already been defined in a previous solution.

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The Payment Processing Outsource Project will replace the current Data Central system with an outsourced service from EDS. Data files will arrive from EDS via the External Data Gateway (EDG) before being copied to the "Banking Gateway". From here the user can access them for manual upload to POLFS.
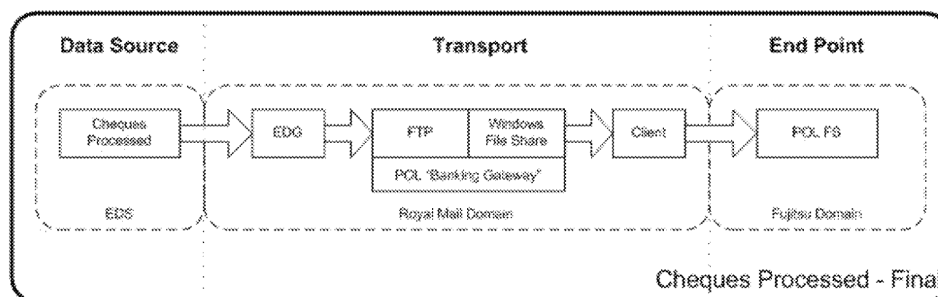

Figure 8 : Cheques Processed Interface - Final

The advantage of this approach is that the process for the end-user should not change.

8.2.4 Technical Infrastructure Component Definition

These will be clarified in the LTM.

8.2.5 Processing nodes

At this time only the following absolute restrictions are known:

CLIENT* (Clients)
All client PC's need to meet the agreed minimum requirements for a SAP user in Royal Mail:
- PIII 350MHz with 128MB ram minimum
- IE 5.5[9]
- Citrix MetraFrame client

It should also be noted that there are known problems with certain functionality (e.g. downloading local reports) when a Sun Java Runtime is installed on the PC.

RMSAPPS (Print Server)
During evaluation (by the SAP TCE), running the SAP lpd service on Windows 2000 proved unreliable when compared to running it on AIX. It is therefore recommended that the Print Server not be implemented on Windows 2000 and the AIX platform be utilised.

Nodes will be defined in greater detail in the Prism LTM and the Fujitsu design document.

8.3 Service Management

Details of Service Management are to be clarified.
Current working assumption is that automated alerting is not required for Release 1.

8.4 Backup Strategy

Backup of the application and data tiers are the responsibility of Fujitsu Services.

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[9] Immanent upgrade to IE6 is known and understood to impact the "standard" image.

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Backup of the presentation and printing layer are the responsibility of Prism. As it is not as volatile as the application layer, it will be backed up on change.

8.5 Business Continuity Strategy

The business continuity strategy aligns to the three main zones of responsibility in this solution:

8.5.1 Fujitsu Domain

DR of the application and data tiers are the responsibility of Fujitsu Services and are detailed in their documentation. Any failover occurring in the Fujitsu domain should be transparent to Prism (i.e. IP addresses etc do not change).

8.5.2 Prism Domain

8.5.2.1 Clients

As the client base is distributed across more than one site, DR of clients is assumed not to be required.

8.5.2.2 Network

The Royal Mail network is distributed and so additional DR of the WAN is assumed not to be required.

8.5.2.3 Data Centre

In this solution, the following nodes are hosted in the Prism NDC and therefore require DR:
- RMSAPPF – The shared SAP Presentation Layer offers a DR capability that may be subscribed to.
- RMSAPPS – A Printer Server as used by POL in this solution is not part of the standard SAP Presentation Layer and so not currently covered by any DR arrangement. POL confirmed that DR of printed output was not a requirement for S60 and it would be reviewed for S80.
- EDG – The managed EDG service offers a standard DR capability that may be subscribed to.
- BGW – Not currently covered by DR.

Furthermore, to support these logical links also need to be covered:
- EDS to EDG
- EDG to BGW

Although standard DR capabilities are available for some of the above components, costs have yet to be provided to POL. Once in possession of these, POL will clarify the level of cover required.

Required user capacity at Release 3 would be 25 concurrent users.

Any failover occurring in the Prism domain should be transparent to Fujitsu (i.e. IP addresses etc do not change).

8.5.3 Inter Domain

As Fujitsu Services are responsible for the data link connecting application to presentation, they will be responsible for providing the link to the Prism DR site. Ie the logical links
- RMSAPPF to POLFSA
- RMSAPPS to POLFSA

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8.6 Network

As per the diagram in section 8.1 (Technology Overview), the network connectivity of this solution is shared.
Fujitsu Services are responsible for:
- Application to Database
- Application to Prism Data Centre
- Fujitsu Services network termination in Prism Data Centre to Fujitsu Services FTMS Server

Prism are responsible for:
- Fujitsu Services network termination in Prism Data Centre to Presentation Layer
- Presentation Layer to Royal Mail WAN
- Fujitsu Services network termination in Prism Data Centre to Print Server
- Print Server to Royal Mail WAN
- Fujitsu Services FTMS Server to Prism Data Centre LAN
- SAP remote access into all SAP systems used in this solution

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8.7 Security

There are three main zones of security in this solution:

8.7.1 Fujitsu Domain

Security up to and including the Fujitsu Services network termination is the responsibility of Fujitsu Services. Access from the Prism Domain into the Fujitsu Domain is via one of the following routes:

- Application – Access to the SAP application via standard SAP user access.
- Network – FTP access to development servers to test file uploads.

8.7.2 Prism Domain

Security on the Prism/Royal Mail side of the Fujitsu Services network termination in the Prism Data Centre is the responsibility of Prism. It will be addressed as follows:

- Physical – Access to the Prism Data Centre and connected access points will be covered by the standard Prism/Royal Mail access policies.
- Network – No authentication or encryption is required.
- Application – Standard SAP access control will be used. No encryption is required.

8.7.3 Inter Domain

- Network – Traffic crossing between domains is the responsibility of Fujitsu and will be documented by them. It is understood that the current approach is to encrypt this data at the network layer using IPSEC.
- Firewalls – Detailed firewall configuration will be held by Prism & Fujitsu Network teams. For security reasons it will not be generally available.

POL has not yet completed a data classification exercise to understand if the above levels of security meet their requirements (i.e. is application level encryption required between client and server). The POL Design Authority has accepted the above as the working assumption and agreed any changes will be handled under formal change control.

More detailed information with regards to SAP specific security ownership and considerations can be found in the Prism SAP Documents POLFS-SEC. See section 1.5.1 - Associated & Reference Documents for version information.

8.8 Technology Risks & Issues

The following technology risks have been identified for this solution:

Ref	Description and Consequences	Probability (1 to 5[10])	Impact (H / M / L)
1	Implementing a separate print server in this manner has not been undertaken in Royal Mail before now. Technical difficulties may be encountered causing an increased implementation time.	4	M
2	Implementing a separate print server in this manner has not been undertaken in Royal Mail before now. It may not work.	1	H
3	POL may require greater levels of security. This would impact the design.	2	H
4	Implementing Workplace in this manner (cross domain) has not been undertaken in Royal Mail before now. Problem resolution may incur time delays.	3	M

Table 19: Technology Risk Log

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[10] Probability of 1 is low and 5 highly likely.

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9 Issues / Risks and areas for further investigation

This section documents those things that have been uncovered as requiring further attention during the writing of this document. The project definition needs to make allowance for further analysis or architecture work to enable the Logical System Architecture created in the project phase to address these items in more detail.

Ref	Description and Consequences	Probability (1 to 5[11])	Impact (H / M / L)
1	The configuration of the Fujitsu and Prism firewalls to allow interaction between the various components has proved a lengthy exercise due to the complex infrastructure interactions. It is therefore likely that achieving maximum security whilst retaining all functionality will require some trial and error and be time consuming.	5	M
2	Internet Explorer v5.5 is to be upgraded to v6 in the near future. Firm dates are not currently known.	5	H

Table 20: Technical Risk Log

10 Key Project Tasks and Milestones

The details below are provided for guidance only. For the most current dates, please refer to the project manager (Peter Flood).

5 Jan 2004	Release 1 Unit Testing starts (D)
16 Feb 2004	Release 1 In Stream testing starts (Q)
29 Mar 2004	Release 1 Application Handover to Fujitsu
2 April 2004	Release 1 Integration testing (Fujitsu) starts
3 May 2004	Release 1 Customer Acceptance testing starts
17 Jul 2004	Release 1 Live Implementation starts

11 Costs

Costs are not included in the scope of this document.

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[11] Probability of 1 is low and 5 highly likely.

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12 Appendix A – Amendment & Change Log

Log No	Date	Requested By	Amendment / Change Details	Reflected In
1	9th Feb 2004	Peter Flood	Various clarifications / typos See quality view sheet for draft B	Draft C
2	9th Feb 2004	Penny Maguire	Various clarifications See quality view sheet for draft B	Draft C
3	9th Feb 2004	POL DA	Join DA meeting 28/01/03 Clive Read confirmed there would be no automated interface for bank statements ie. Data would be manually re-keyed in S60.	Draft C
4	9th Feb 2004	Rob Bradshaw	Clarified Logical Design of Cheques Processed Interface (section 8.2.3.1) and how it changes over time	Draft C
5	13th Feb 2004		Updated 1.3 Relationship to Other Documents	Draft D
6	13th Feb 2004		Added 4.2.3.15 Printing Requirements	Draft D
7	13th Feb 2004		Expanded 5.7Summary of Design Alternatives to show options and cross reference options papers	Draft D
8	13th Feb 2004		Added 6.3 Application Landscape	Draft D
9	13th Feb 2004		Changed 6.4.4User Authentication & Access Control to reflect changes in agreement of approach to users & roles.	Draft D
10	13th Feb 2004		Updated 8.3Service Management to reflect new assumption stated by Paul Squires that automated altering would not be required in release 1.	Draft D
11	13th Feb 2004		Clarified all 8.5 Business Continuity Strategy	Draft D
12	13th Feb 2004		Clarified all 8.7 Security	Draft D
13	20th Feb 2004	Rob Bradshaw	Updated Figure 2 : Proposed Solution (End State) to remove Stock Reconciliation & Warehouse Management	Draft E
14	20th Feb 2004	Rob Bradshaw	Clarified that non-functional requirements are compiled from other documents.	Draft E
15	20th Feb 2004	Rob Bradshaw	Clarified 6.4.1 Demarcation	Draft E
16	20th Feb 2004	Rob Bradshaw	Clarified Cheques processed are manually uploaded and bank statements manually entered.	Draft E
17	20th Feb 2004	Rob Bradshaw	Updated 8.2.3.1 Cheques Processed Interface to reflect data now comes from EDS.	Draft E
18	20th Feb 2004	Rob Bradshaw	Updated 8.7.3 Inter Domain to state firewall documentation will be managed separately.	Draft E
19	20th Feb 2004	Rob Bradshaw	Added Technology Risk 4 - WorkPlace	Draft E
20	20th Feb 2004	Rob Bradshaw	Added Other Issues 1 – Firewall Configuration	Draft E
21	20th Feb 2004	Rob Bradshaw	Added Appendix B – Printing Options	Draft E
22	20th Feb 2004	Rob Bradshaw	Added Appendix C – Presentation Options	Draft E
23	8th Mar 2004	Rob Bradshaw	POL confirmed DR of printing not required in S60 (section 8.5.2.3)	V1.0
24	17th Mar 2004	Richard Hopewell	Added printing platform recommendation based on testing (section 8.2.5.)	V1.0
25	22nd Mar 2004	Darcy Hall	Updated print volumes based on TCE testing. (Section 4.2.3.15)	V1.0
26	22nd Mar 2004	Adrian Winwood	Added client restrictions based on feedback (section 8.2.5.)	V1.0
27	19th April 2004	Torstein Godeseth	Updated to reference latest POL/E2E/DES/005 Automated Cash Bank Ledgers Project 2 Release 1 Conceptual Design (was v0.5 – now base-lined at v2.0) - Summary of Design Principles cross-reference - ADS & Horizon files available from 3:00	V1.0

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13 Appendix B – Printing Options

The following is a copy of the printing options paper (draft B) included for reference:

POL SAP FS -
Technical Options - Pi

14 Appendix C – Presentation Options

The following is a copy of the printing options paper (draft D) included for reference:

POL SAP FS -
Technical Options - Pi

Since this paper, SAP have extended WorkPlace support until September 2005, which means this issue does not need to be addressed until S80.