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Post Office Limited Confidential Information

Horizon Next Generation Release 1

End Programme Report

AUTHORS	PMO with PM Support	Lup Yau
REVIEWERS	Programme Manager Head of Delivery PMO Manager Solutions Architect Acceptance Manager Business Implementation Manager Business Change Service Delivery	Will Russell Mark Burley John Wheeler Ian Trundell Noel Beaton Ann Cruttenden Martin Drake Andrew P Jacques
SIGN OFF AUTHORITY	Head of IT Head of Delivery	Lesley Sewell Mark Burley
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1 Document Control Information

1.1 Version History

Version	Date	Change Details	RFC Number
0.1	20-20-20	Initial draft	

1.2 References / Related / Dependent / Parent Documents

Reference	Document Reference	Title	Version	Date
1.1 2.0	POL/HNG/PID/001	Horizon Next Generation Programme Initiation Document	1.3	01/05/09
2.2	POL/HNG/IMP/002	Horizon Online™ Application Branch Migration Document	1.0	04/09/09
2.3	ARC/SOL/ARC/0001	HNG Solution Architecture	1.3	
11.2.1	POL/HNG/SPE/007	Horizon Online Branch Router Installation Document	1.0	04/09/09
11.2.1	POL/HNG/IMP/004	Horizon Online™ Conversion from ISDN to ADSL		
11.2.1	POL/HNG/GUI/001	Horizon Online House Style for UI Text Authoring	1.1	16/07/09
11.2.1	POL/HNG/GUI/002	Horizon Online Day to Day Style Guide for UI Text	1.0	16/11/09
11.2.1	POL/HNG/REQ/014	Horizon Online (HNG) Help, Operational and Maintenance Acceptance Handover	1.0	30/10/09

1.3 Outstanding Issues and Omissions

None

1.4 Terms and Abbreviations

Term	Meaning
ADSL	Asymmetric Digital Subscriber Line
AIS	Application Interface Specification
APOP	Automated Payment Out Payment
BAU	Business As Usual
BFPO	British Forces Post Office

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BIL	Business Information Library
BIM	Business Incident Management
CCD	Contract Controlled Document
CIT	Component Integration Testing
CT	Commercial Terms
CTO	Counter Training Office
DIA	Delivery Integration and Insurance
HLD	High Level Design
HNG (HNG-X)	Horizon Next Generation (Version X)
HR	Human Resources
HSD	Help Service Desk (Fujitsu)
IRF	Input Review Forum
ISDN	Integrated Services Digital Network
ITT	Invitation To Tender
IVR	Interactive Voice Response
LLD	Low Level Design
LRDP	Live Reference Data Proving
MI	Management Information
NBSC	Network Business Support Centre
NFSP	National Federation of Sub Postmasters
OLA	Operational Level Agreement
ORM	Oracle Resource Management
P&BA	Product and Branch Accounting
PCI	Payment Card Industry
PHU	Portable Horizon Unit
PIP	Pricing In Proportion
PIR	Post Implementation Review
PM	Programme Manager
PMO	Programme Management Office
POL	Post Office Limited
POLFS	Post Office Limited Financial Services
QC	Quality Centre
RAB	Release Authorisation Board
RAG	Red, Amber, Green (risk/issue status reporting)
RMG	Royal Mail Group
RV	Release Validation
SBDS	Solution Baseline Document Set
SIP	Systems Integration Partnership (between POL and Fujitsu)
SLA	Service Level Agreement
SLT	Service Level Target

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ST	System Test
SV&I	Solution Validation and Integration
TIS	Technical Interface Specification
UI	User Interface
VSAT	Very Small Aperture Terminal
WWAN	Wireless Wide Area Network

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Contents

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1 Completion Summary

- Over 34,000 New Counter Printers installed in over 14,000 branches
- Data Centres migrated from Wigan & Bootle to Belfast x 2
- 11,485 Branch Routers installed
- 520 branches with BT line installed, in preparation for migration from ISDN to ADSL
- Horizon Online Training provided across the POL Network to approximately 50,000 users
- Over 11,400 Offices migrated from Horizon to Horizon Online

1.1 Background

The Horizon Next Generation (HNG) Programme was established to provide simplified network software platform architecture, based on centralised, rather than distributed, processing. The new simplified Horizon Online system, delivered by the HNG Programme, will facilitate the introduction of future changes, be easier to manage and supports the requirement for network flexibility. The software solution is component or modular based, which will support greater re-use and speedier future development. It makes use of modern, standardised technologies, which enable lower cost of ownership, easier integration with external systems and reduced service management costs.

The HNG Programme did not seek to add new functionality to the existing Horizon system. The Programme applied the principle of 'Business Equivalence'. This meant that the new Horizon Online system covers the same functionality as before, although the user interface looks different to the frontline user and Postal Services were enhanced. In total, approximately £10m worth of business change was introduced. Though the functionality has been largely unchanged, the Programme has introduced a wide range of "behind the scenes" changes that affect all aspects of the current service, including data centres, field service and telecommunications. The Programme also required some new equipment in branches; a communication router in each branch to improve 'in-branch' availability by removing the reliance on the current Gateway

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terminals, and the installation of new counter printers at each counter position to overcome issues with the previous printers.

2 Objectives/Achievements Comparison

Key objectives of the Programme were as follows:

Contractual and Financial Objectives

- The contract for the delivery of HNG will be agreed and signed off by the end of August 2006. (Achieved)
- HNG will provide significant savings in IT costs over the life of the contract. This is crucial to POL IT achieving the 50% reduction in IT costs needed as part of the transformation of the Business.
- The amended contract with Fujitsu Services covers the period 2010 to 2015. (Achieved)
- Deliver new solution within Business Case financials (Achieved)
- Fujitsu Services will work with POL to improve the 50% reduction in IT costs through joint working under the Systems Integration Partnership (SIP) strive. (Achieved and continuing)

Note that the full details of financial objectives are contained within the Business Case.

The requirements defined ensure that:

- The new system is more flexible and simpler so that it can be modified easily to meet the needs of the changing Business.
- The new system is able to operate to newly defined service levels, which better meet the needs of the Business.
- Operational change was minimised as far as possible to reduce training and familiarisation costs and timescales.
- The Programme delivered a Business Equivalent system, except where changes were explicitly agreed or required, due to IPR not being owned by either Fujitsu Services or POL.
- The modified design should enable reductions in the time to market for major developments and new products brought into service.
- Changes to the interfaces with all external systems were minimised.
- Where identified and agreed with the Programme, the new

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system supported other POL initiatives e.g. Rural Strategy.

The HNG Requirements baseline defines, and the HNG Applications supports, the operation of Post Office business processes in a manner that achieves the same business outcomes for PO Ltd and its Clients and achieves the same operational effect within a Branch, as currently provided by Horizon at the agreed baseline ("Business Equivalence").

2.1 Financial Results

The programme continues to forecast delivery of the Business Case significantly below baseline cost.

Furthermore, POL continues to receive in excess of the full Business Case benefits, plus additional benefits derived from other events and actions by the programme team. This represented a contribution in excess of £56.1m per annum (target £43.6m) in 2009/10 and a forecast of £58.6m (target £52.7m) for 2010/11.

The summary Business Case position is as follows:

	TAS	NPV	Benefits (10/11)	Payback
Business Case	£127.6m	£89.3m	£52.6m	4.5 years
Current Forecast	£111.5m	£96.6m	£56.8m	4.4 years

2.2 Operational Impact

2.2.1 Data Centre

The Data Centre design for HNG-X moves away from an 'active/active' configuration and adopts the more customary configuration where the primary site serves production and the other remains on standby for use in disaster recovery, thus allowing the disaster recovery site to be used as the testing environment. The Data Centres at Wigan & Bootle were successfully moved to Northern Ireland where there is one Data Centre in constant operation with a disaster recovery back up data centre nearby. This was completed on 31/10/2009, initially servicing Horizon, then moving through a

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combined Horizon and Horizon Online service, and finally to Horizon Online only. The Data Centres at Wigan and Bootle were decommissioned over 2 weekends, completing on 10th October 2010.

2.2.2 Branch Router Migration

The branch router is compatible with all branch communication types; ADSL, ISDN (including Kingston Communication ISDN branches) and branches with ADSL as primary communications and ISDN for back up communications and VSAT. It has an inbuilt mobile broadband wireless network (WWAN) using either Orange or Vodafone service providers, which the router will switch to if the primary communications fail.

The Branch Router assumes the communications role of the gateway terminal, and routes all data to and from the data centres in Northern Ireland, to and from all counter terminals in the branch.

All branches have one router installed, near what was previously the gateway terminal. Where a branch operates portable Horizon equipment (Core and Outreach branches); there is one router installed, which is taken with the portable equipment to every service point.

The existing ISDN luggable terminal was replaced with a Portable Horizon Unit (PHU) version 2 on migration to Horizon Online™.

2.2.3 Horizon Online User Interface

The Horizon Online User Interface (UI) was designed to be intuitive and easy to use. The biggest change from the Horizon system is how the system looks on screen and the way in which the user navigates to products and services. Whilst the new system looks quite different, the products and services have not changed. Anecdotal comments captured from the Kendata[1] questionnaire feedback have been very positive. Attached are a few examples from postmasters following migration to Horizon Online.

"It is quick and efficient."
"Seems a lot simpler than feared!"

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[1] Kendata is the external company who scanned the questionnaires and provided weekly MI reports and details of all comments provided by the Post Office branches.

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"Horizon online seems to be quicker and more explanatory, especially the help button."
"When the new system is in you find it much easier to use than you thought."
"I was very anxious before we migrated but I think it is a great system now. I got the hang of it easily enough."
"Online Help is really useful. It lets you answer customer queries without leaving the counter."

2.2.4 Counter Training Office (CTO)

The CTO solution for Horizon Online™ required the installation of a new ADSL communications line as the CTO is connected into the Horizon Online™ Data Centres.

2.3 Technical Impact

The System Overview is described in the HNG Solution Architecture Outline ARC/SOL/ARC/0001 but for convenience a high level description is repeated here from paragraph 1.3 of that document.

The HNG-X solution is based on a set of business applications that support a centralised model for data storage. The counters retain operational data (e.g. Reference Data) and business logic, but transactional information is stored directly in the Data Centre.

The counter side of the new applications is based on Java technology. The counter hardware and operating system are reused from Horizon. A number of legacy databases and applications are retained at central level. The Disaster Resilience model proposed in HNG-X is based on one live and one stand-by Data Centre. The Live Data Centre is reinforced to provide local resilience. The stand-by Data Centre is a copy of the live one. The primary storage arrays of the two Data Centres are kept aligned using synchronous replication technology. The stand-by Data Centre is also used for testing purposes. Failover technology is used to enable the switch of the Data Centre from stand-by to operational within contractual time frames.

The Network solution is based on a combination of low-cost ADSL, ISDN, and mobile technology. Routers were installed in all Branches prior to the rollout of the new applications.

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2.4 Financial Areas of Success and Failure Planning and Implementation

2.4.1 Plan Slippage

Over the lifetime of the HNG Programme, the plan has been delayed and re-baselined on several occasions by Fujitsu for different reasons. Slippage of Programme milestone dates have been challenged and accepted. POL has not been financially penalised for slippage of Programme plan dates due to the contract protecting the full business case benefits independent of when the solution is actually delivered and the actions of the POL HNG Programme team.

Key areas where the HNG Programme Plan slipped were due to:

- Delays in solution development
- Delays to testing, issues with test rigs
- Branch router roll out delays impacting start of branch migration pilot
- Data Centre Migration delays
- Data Centre Outages resulting in suspension of branch migration pilot

2.4.2 Financial Success

POL negotiated in the contract with Fujitsu to protect the full Business Case benefits in the event of delays attributable to Fujitsu. Also, additional benefits have subsequently been derived from further actions by the programme team to reduce POL costs. Overall this means that the Programme has delivered ahead of the Business Case, with a financial contribution in excess of £56.1m per annum (target £43.6m) in 2009/10 and a forecast of £56.8m (target £52.6m) for 2010/11. Despite the HNG Programme timescales slipping against the original planned milestones, as stated above, POL were not penalised financially as the Business Case benefits were protected.

2.5 Quality of Service

2.5.1 NBSC and HSD Statistics

Throughout the pilot and roll out of Horizon Online, call volumes and incidents to NBSC and HSD have been tracked and summarised in a daily report (see attached). A few incidents, such as system outages and printer problems have resulted in pressure on the call centres. However, mitigations put in place averted any major disruption to

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services, and Service Levels Agreement targets were being hit by the end of the pilot phase, and mostly maintained during rollout.

A snapshot position as at 21/08/2010 is as attached.

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2.5.2 6 Dials Report

HSD call statistics and engineer visits to branches have been tracked via the '6 Dials' report (see attached), which is produced by Fujitsu Customer Services. This report provides detailed analysis of the type and frequency of calls to the HSD and the level of engineering service provided if required. The statistics illustrate that whilst there have been incidents which have resulted in pressure on the helpdesk and engineer service, both of these have been able to cope with the workload. This MI continues to be monitored on a daily basis.

A snapshot position as at 10/09/2010 is as attached.

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2.5.3 Cumulative MI Report

Roll out statistics for Router and Branch Migrations were logged on the 'Cumulative MI Report' (see attached). This tracked the progress for pilot and roll out for both the Router and Software.

A snapshot position as at 15/09/2010 is as attached.

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2.6 Operational Performance

To ensure that the capacity of IT services and the IT infrastructure is able to deliver the agreed service level targets (SLT) in a cost-effective and timely manner. Capacity Management considers all resources required to deliver the IT service, and plans for short, medium and long term business requirements. As part of the service management requirements, Fujitsu produce a monthly report for review, which outlines the key statistics for the previous period. This report is then used to manage risks, issues and improvements to the Horizon Online estate.

An example of the Capacity Management Report (August 2010) is attached.

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2.7 Staff Number Targets

Not applicable – no staff number targets set.

3 Costs and Benefits Review

3.1 Business Equivalence

The HNG Requirements baseline defines, and the HNG Applications supports, the operation of Post Office business processes in a manner that achieves the same business outcomes for PO Ltd and its Clients and achieves the same operational effect within a Branch, as currently provided by Horizon at the agreed baseline ("Business Equivalence").

3.2 Transaction Timings

The HNG Programme Team conducted benchmarking on timings for transaction/back office reports for the Horizon system against Horizon Online.

Early analysis was very positive, with postal services in Horizon Online in excess of 20% faster than Horizon. Only two transactions have deteriorated with respect to speed of execution; a simple stamp sale by 6% which was expected, and Debit Card payment, which was not. It is suspected that the Debit Card issue is due to the emulator used during testing (not the true live system) and this is currently under investigation. This has not been observed in live operation and is expected to be resolved imminently.

There is very positive news in terms of back office timings, with all report production on Horizon Online taking less time compared with the old Horizon solution. This mirrors the positive feedback received from the Network.

Presentation on timings for transaction/back office reports for the Horizon system against Horizon Online given to Richard Barker, Director of Sales, POL, attached.


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3.3 Wireless Back-Up Network

The branch router is compatible with all branch communication types; ADSL, ISDN (including Kingston Communication ISDN branches) and branches with ADSL as primary communications and ISDN for back up communications and VSAT. It has an inbuilt mobile broadband wireless network (WWAN) using either Orange or Vodafone service providers, which the router will switch to if the primary communications fail.

3.4 Impact on Help Desks

Since full rollout commenced, the NBSC experienced an increase in call volumes above those predicted. The main issues that had a direct impact on performance levels were:

- a lack of understanding of Branch Trading (no change to the procedure but branches still required hand-holding)
- error messages relating to which trading period the branch was in
- branches failing to select the correct IVR option.

Outbound activity was also extended at minus one week to migration, as a result of over 60% of branches failing to complete their training. This was above initial forecasts which were felt to be very generous. However, it is possible that the ongoing delays to the solution rollout may have attributed to a lack of action in this area.

NBSC have managed the increased volumes whilst service levels were hit. The overall service to the branches throughout what has been a massive Programme for POL, was excellent, given the various challenges faced and dealt with. Royal Mail Customer Services, as a supplier, has committed all it can to manage the impact of HNGX and should be commended for what has been achieved.

On HSD, there were numerous system outages, including blue / turquoise screens and an increase in inappropriate calls, which impacted on NBSC, caused by branches choosing the wrong IVR option. However, initial service levels of the desk were unaffected until the latter part of the rollout that was further aggravated through the gold label printer issue, which was non-HNG related. All the system issues have now been resolved and the impact has subsided. There are no issues on the desk at present.

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4 Lessons Learned

Attached is a sample of the key lessons learned from the HNG Programme throughout the lifecycle. All lessons learned from the Programme have been captured and logged centrally within POL IT for assessment and sharing with future POL IT Programmes and programmes.

Stage Captured	Category	Task/Activity	Lesson Learned (positive or negative)	How to Progress (if required)
Stage 3a - Detailed Requirements	Requirements Management	Where a feature of a new solution is a consequence of a solution design decision, the Post Office needs to assess the level of impact this will have on POL resource, POL operations, and on future strategy.	A facility needs to be included with our suppliers (in this case Fujitsu), which acknowledges the need for requirements and acceptance criteria to be written and agreed during or after the identification of design-driven elements, and POL needs to ensure	To be provided to Design Authority and Business Analyst Job Family champions for inclusion in best practice, and to DIA-owned Lessons Learned Log
Stage 3a - Detailed Requirements	Requirements Management	Ensure the Acceptance strand of the Programme have an integral link with Testing and are routinely notified of all testing defects (not just those that impact/are linked to defined requirements)	Programme processes for the management of all defects (not just those linked to requirements) need to be established, agreed, and communicated at an early phase.	The lesson should be discussed by Programme Managers and Business Analysts at the awayday events.
Stage 3a - Detailed Requirements	Requirements Management	Programme Lifecycle	The iterative process of realising Use Cases jointly was successful, as opposed to passing documents between POL and the supplier (in this case, Fujitsu) back and forth (ref Conceptual Design - Design Proposal	Use Case process for documenting requirements should be adopted for future Programmes.

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			in the past).	
Stage 3a - Detailed Requirements	Stakeholder Management	Programme Lifecycle	Aim to get POL objectives aligned with the suppliers' as far as possible. This leads to win-win behaviours.	These should be set up during Programme start up.
Stage 3a - Detailed Requirements	Planning	Programme Lifecycle	Need to ensure that the supplier, when allocating development timescales for any activity that they build in enough time to meet all requirements for the differing types of branches and ensure that the most difficult are not left till the end, as more time is required for these.	This should be established during Programme start up.
Stage 5 - Build & Test	Technical	Risk-based test approach, in collaboration with the Requirements team.	The business should buy-in to the Risk Based test approach more. Analysts should assess requirements for Business impact. Requirements set must be living documents with business impacts kept updated. Held in DOORS (and Quality Centre)	Test Team and Business Analysts need to adopt strategy more widely.
Stage 5 - Build & Test	Technical	Defect analysis towards the end of a Programme.	There is a need to conduct an analysis of defects coming into live at the end of each Programme, to close the loop. This is an essential process improvement opportunity.	Test Team to progress.
Stage 5 - Build & Test	Technical	Reference Data testing for HNG	Approach to Reference Data has been patchy across HNG, with some good work towards the end, but inconsistencies at the beginning. Need to be more collaborative. Lesson is better planning - close alignment and communications between Programmes and ref data.	End to end review between the approach to Ref Data is required.
Stage 7 -	Technical	Investigation of	Investigation of live issues on the system. Need to	Noel Beaton can take this

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Closure		live issues	locate a live-like kit close to the BA's (in Chesterfield). Use of a CTO? Optimally, locate a Model Office there.	up with Mark Burley in the first instance as part of his Model Office assessment.
Stage 7 - Closure	Management	Service Delivery representation on the Programme	Having a designated Service Delivery work-stream manager on the Programme worked very well.	Service Delivery is looking to replicate this elsewhere.
Stage 7 - Closure	Training and Communications	Migration process. Branches didn't necessarily follow the correct process for pre-migration activities on the day of migration.	Do not assume branches follow the process for pre-migration checks on migration day - provide a detailed process, detailing the steps encountered e.g. cutting off mails.	Produce a comprehensive detailed work-aid for all users, to be able to follow exact steps required.
Stage 7 - Closure	Planning	Scheduling branches for migration; could have migrated more each evening.	Whilst scheduling branches for migration, the drop out rate was not factored in, meaning that there was spare capacity for migrations on most evenings/days. In future, excess number of branches should be scheduled to account for drop outs - this should be modelled, as the drop out rate decreases as more branches migrate (trend analysis). The Branch migration project had multiple scheduling constraints and this impacted the scheduling. In future the number of constraints needs to be addressed as early on as possible to ensure there is more flexibility.	Lorraine Hall to produce trend analysis from HNG project, to produce a model for future reference. Challenge constraints validity. 'Must haves' or 'nice to haves'.
Stage 7 -	Planning	Planning: Difficult due to	Is there an off the shelf planning tool that you can	Need a reusable

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Closure		shifting time-frames and complicated nature of criteria for scheduling branch migrations Lack of technical support for the HNG scheduling plan	input criteria into, so that when new dates are inputted, the tool calculates the time shift to accommodate the planning criteria? Peter Catt's departure left the HNG Migration team without support back up for the HNG scheduling tool. His expertise (Excel skills) will be missed.	scheduling tool which can be used for other projects, flexible depending on size and scope. (Consider use of Microsoft Access. Database needs to be able to accommodate changes.) Need a POL standard, scheduling tool or technical support. Technical Support should document usage and update of tool.
Stage 7 - Closure	Reference Data	Data on branches for migration; information not aligned with supplier and inaccurate	Core Data on branches was not always accurate, e.g. some branches showing up as temp closed when they were trading. Recommend contacting all branches regardless of core data status. PHU Core data inaccurate; recommend determining location of kit up front for all outreach branches. The colour coding to identify changes to the schedules for additions and cancellations worked well to provide a clear daily picture. In future the schedule of branches should be base-lined by	Need to baseline branch lists with suppliers upfront. Contact every branch regardless of their status on the Core Data list. Feedback discrepancies in the Core data to the Reference Data team. Clear reporting agreement. Daily updated schedule to be issued as soon as any

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				changes are made. Keep everyone informed.
Stage 7 - Closure	Requirements Management	PHU/VSAT development left too late	Supplier should manage development of solution for PHU and VSAT in parallel, cross-working between teams to avoid duplication and ensure consistency. Avoid reliance on the same resource for the development of these solutions at the end each time.	Incorporate into requirements. Milestones / gateways for each different solution.
Stage 7 - Closure	Requirements Management	Full scenario walkthroughs	Full scenario walkthroughs should be completed early and linked to test.	Walkthroughs should be factored into requirements. Development team should explore options to progress failures where possible. Not just choose regression as the only option. Walkthroughs should be part of the Test Plan, and migration team should be invited to attend these.
Stage 7 - Closure	Deploy	Migration of VIP Crown offices - avoid disruption to service.	Completing migration of flagship Crown branches over the weekends worked well to ensure business was not affected and should be continued for future projects. The strategy to migrate all the Crown Branches early in Pilot had benefit as it made scheduling easier and was good PR for	Good PR exercise, getting buy in from the business. Consider this option for future developments which impact Network. Involvement of

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			stakeholders. It also provided a good volume of transactions to be monitored so this approach should be considered again for future deployments.	Business Partner for Network was key in getting Network buy in, and Crowns involved.
Stage 7 - Closure	Testing	Testing and migration of different types of kit.	Representing a cross section of the estate in Model Office for example standard kit and VSAT was beneficial in helping the project to be successful. This should be continued for future deployment projects.	Should be part of requirements that Model Office represents each type of counter and branch network solution.
Stage 7 - Closure	Deploy	Migration of Core and outreach kit at the same time.	The approach taken in the branch migration project whereby the core and outreach kit were migrated at the same time helped to reduce POL support and engineering overhead and this worked well and should be continued.	Should revisit core data - easy to identify relationship between core and outreach branches.
Stage 7 - Closure	Governance	Communications used for daily migration status	The pre-email for – Day 1 from Post Office on the status of branches following the button press worked well in the project as it provided a clear position going into migrations. Using email to communicate the position of migration failures/success/differences and unknowns rather than providing the detail over phone worked better during rollout and it minimised the potential for human error in passing details of FAD codes. The text message sent post migration worked well	Text and email approach for providing daily status update should be employed in future projects.

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			to communicate the status of branches to stakeholders and provided a single point of contact which should be continued.	
Stage 7 - Closure	Other	ISDN branches communications issues	If possible all ISDN branches should be nailed up (set to continuous ping) for future migrations to prevent possible communication issues as this helped during tail management with problem branches.	Discuss with supplier, Fujitsu
Stage 7 - Closure	Requirements Management	Understanding of possible alternatives following migration failure.	It would have been more beneficial to have had a full understanding early on as to what alternatives were technically possible following a migration failure instead of the branch just being rescheduled. Could the migration be manually pushed through in the morning for example?	In Requirements, Solution should be developed to overcome intermittent power failures.
Stage 7 - Closure	Other	Technical Pre Migration Health Checks should have been conducted earlier to highlight issues which required engineer visits to resolve.	Consideration should be given to whether technical pre-checks could have been done earlier for example two or three days before migration instead of one day before. If there are any open issues against the branch this would give more time for engineering calls (hardware swap outs). An additional check that would have been useful and should be considered in future is checking branches to see if they have any power failure issues in their recent history.	Discuss with supplier, Fujitsu.

Complete lessons learned logs attached below.

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5 Dependencies Managed

Contractual Programme dependencies were managed throughout the course of the HNG Release 1 lifecycle. A log of the dependencies tracked, managed and closed is attached.


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6 Risks Realised

The key themes for risks realised

6.1 Solution Functionality and Scope

The scope of the HNG Programme changed over the course of its lifetime. Before decisions were made, these changes were documented as risks, which subsequently became decisions; the deferral of Auto Fault Logging and migration from Windows NT to Windows XP operating system. In the early stages of the Programme, consideration was given to refreshing all the counter hardware, but due to cost constraints, this was scaled down to only include the counter printers and the installation of branch routers to assume the communications role of the gateway terminal. The solution for an alternative to the WWAN back up network, in areas where there is insufficient signal strength, has yet to be resolved.

In order to provide a stable state of the Horizon system to apply business equivalence to, a Change Freeze was put in place. This affected the rest of the business as all new CRs and CPDs during the period had to include budget for both Horizon and Horizon Online changes where applicable. Though this change was necessary, its impact was mitigated by robust communications and HNG attendance at the Business Change Acceptance Board (BCAP) which subsequently became the Gating Forum.

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6.2 Plan Slippage

Throughout the HNG Programme, the plan has shifted to the right on a number of occasions by Fujitsu Services, for various reasons. Slippage of Programme milestone dates have been challenged, accepted and the plan re-baselined. Where the slippage was significant, acceptance of the revised plans has been made via contractual changes. Key areas of slippage include solution development, solution testing (construction and contention for test rigs), data centre migration, branch router roll out, solution pilot and roll out. Though there have been significant delays to the HNG Programme delivery, Programme Management has consistently emphasised the importance of delivering a quality product. Early indications are that the new system is working well and proving to be popular with the Network users. This justifies the delays to product delivery encountered.

6.3 Personnel

The HNG Programme suffered from the frequent replacement of the Fujitsu Programme Manager and other key Programme posts within the Fujitsu Programme team. There was a diversion of Senior Fujitsu resource away from HNG to respond to other non-HNG work e.g. ITTs from RMG. This resulted in a lack of continuity in the Programme at times, which was frustrating. However, consistency of POL personnel working on HNG was advantageous; knowing the full history and context of Programme deliverables and issues gave POL a stronger position when negotiating contractual details. The contention with Horizon for Fujitsu Test resource and reliance on certain critical individuals' expertise resulted in some key staff bottlenecks within Fujitsu. This contributed to the plan slippage in addition to the factors described in section 5.2.

6.4 Stakeholder Management

The Business Change team was tasked with managing the HNG stakeholders. Stakeholder risks emerged at various times during the Programme, resulting from slippage to the plan dates and system outages during the pilot and roll out phase; pressure from BAU to provide actual dates for key Programme activities during periods of uncertainty and losing the support of the NFSP for a period during March and April due to system outages caused by Data Centre incidents and errors. Though these risks were realised to some degree, the extent of these were mitigated by effective stakeholder engagement and communications. A separate risk resulted from

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HNG Migration Support having to conduct compliance checks during branch visits; this resulted in branches being suspended due to cash discrepancies and a reluctance of some branches wanting to migrate.

7 Issues Encountered

Issue	Outcome/Mitigations
Plan slippage (formerly managed as several risks) • Counter development late against the version 60 plan • Rig Builds behind schedule, especially Volume and Integrity Test rig, resulting in downstream impact on testing timescales. • Branch router roll out delays impacting start of branch migration pilot • Data Centre Migration delays • Data Centre Outages resulting in suspension of branch migration pilot	Re-planned several times during the Programme lifetime. This issue was accepted.
Mobile signal strength to some branches is inadequate to support the original HNG proposition.	Quality of Service being discussed and agreed between POL Service Delivery and Fujitsu Customer Services.
HNG System Stability: Outages and disconnections from Data Centre	Data Centre fixes and counter fixes were applied. Audit conducted on hardware resilience. All components on the system were monitored. Early morning health checks. Fujitsu engaged with Oracle for technical expertise. A team was sent from the US to manage and resolve the technical database issues.
Screen Freezes/ re-boots and recoveries. Incidents were too	Data Centre fixes applied. 'Quick Reference Guide' on Recovery

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high, causing frustration at branches.	issued. Daily Reviews conducted.
Branch Trading Statement; Trial balance causing final balance volumes reporting issues.	Problem fixed with Release R1.08
Security Acceptance Incidents. Lack of Patch and Vulnerability Management.	Escalated to Fujitsu to confirm and deliver rectification plan. An agreement with PCI auditors to apply all key security patches was reached. PCI audit of branches conducted in August 2010. Now awaiting final report from the Auditors. Penetration testing was conducted.

HNG Risks and Issues Log (DRAID) as at 20/09/10

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8 Outstanding Risk and Issues at Programme Closure

Note: These are key items only. All items are detailed in the individual handover reports referred to in Section 11.1.

9 Change Requests

CT Number	Title	Release	Status	Sign Off Date	Authorised Gross
0433b	HNG-X Commencement of Requirements Analysis and Solution Specification Stages.	HNG-X Rel 1	Signed off	08 February 2006	£809,016.90
0450a	HNG-X Solution (Master Provisions)	HNG-X Rel 1	Signed off	08 February 2006	£0.00
0487a	HNG-X Continuation of Requirements Analysis	HNG-X Rel	Signed off	19 May 2006	£944,064.00

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	and Solution Specification Stages.	1			
0509a	HNG-X Further Continuation of Requirements and Analysis and Solution Specification Stages	HNG-X Rel 1	Signed off	08 August 2006	£8,226,535.00
0675	CONSULTANCY - APOP Future functionality	HNG-X Rel 1	Signed off	12 May 2008	£13,620.00
0685a	Provision of Router Cable Tags	HNG-X Rel 1	Signed off	18 June 2008	£0.00
0715	Solution Specification and Design for a Link to Experian	HNG-X Rel 1	Signed off	06 January 2009	£28,320.00
0717	Postal Services Destination Area Rules (MBC001) & PIP Format Selection (MBC003)	HNG-X Rel 1	Signed off	24 February 2009	£24,952.29
0719	Increase to Trace and Trace Contractual Limits for HNG-X	HNG-X Rel 1	Signed off	04 February 2009	£9,049.11
0746a	Increase Max Branches (Re-wording of HNG-X requirement)	HNG-X Rel 1	Signed off	26 June 2009	£0.00
0765	Provision of Test Resources to Fujitsu	HNG-X Rel 1	Signed off	16 September 2009	£54,225.00
0767a	Amendment to the existing Vocalink firewall rule mapping - HNG x	HNG-X Rel 1	Signed off	06 November 2009	£2,618.29
0792a	AUDDIS for PO Essentials Direct Debits (Fujitsu Aspect)	HNG-X Rel 1	Signed off	01 February 2010	£20,244.13

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0803	HNG-X Receipt for Regulatory Compliance Training transaction	HNG-X Rel 1	Signed off	08 April 2010	£2,500.00
0862	HNGx Recovery Process Improvements	HNG-X Rel 1	Signed off		£0.00

CCN1268 Number of changes encapsulated in Commercial Agreement. These included:

1259b	HNG-X	15/05/2009	Deferral of Auto Fault Logging	SUBMITTED

Additional change deferred from HNG Release 1:

Deferral of migration from Windows NT to Windows XP or Linux

10 Quality Reviews

10.1 UI Design

Horizon Online User Interface was designed, developed and tested with the involvement of over 400 Horizon users. Feedback was taken from sub-postmasters and staff from around the country during conferences, exhibitions and meetings whilst the prototype of the User Interface was being demonstrated. In that time, the HNG team met with over 3,000 people. See Section 2.2.3

10.2 Testing

The following is an overview of the testing effort. These high-level figures are taken from Quality Centre (QC).

Approx 25,000 tests executed at least once. This breaks down as follows:

- System Test (ST) 5,000
- SV&I functional 4,000
- SV&I non functional 4,000
- RV accreditation 3,500
- RV migration 2,500
- The rest are a mixture of Volume, Integrity, Disaster Recovery, LRDP and automation testing.

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These figures do not include any Component Integration Testing (CIT) that over the duration of HNG became an important part of the testing process.

There were 12 cycles of SV&I testing.

10.3 Training Website Usage

The Training Website enabled end users to familiarise themselves with the look and feel of Horizon Online, learn the new structure of screens and try out some transactions and procedures. Usage of the Horizon Online Training Website was monitored to gauge the level of how widespread and effective it was, as one element of the training suite. Attached are high-level statistics to provide a snapshot view.

- High level numbers for training website usage as of 08:30, 31 August 2010.
  - Number of FAD codes with one or more registered accounts: 6,474
  - Number of registered accounts: 16,231
- Frontline branches:
  - 6,370 FAD codes with one or more registered accounts
  - 15,366 registered accounts
- Administrative units:
  - 24 FAD codes with one or more registered accounts
  - 865 registered accounts

10.4 Branch Migration Customer Satisfaction

Kendata statistics that provide the collative branch satisfaction for Horizon Online Migrations.

A snapshot position as at 19/08/2010 is as attached.

Horizon Online™ Programme -			**Overall I am satisfied with the communication and support provided for migration**				
	wk	no. branch returns	Cumulative Average	Strongly Agree	Agree	Disagree	Strongly Disagree
Thursday 19/08/10	31	790	86%	65%	32%	4%	2%
100 % score indicates all branches answered strongly agree				number of branches responding to an individual question			
0% score indicates all branches answered strongly disagree							

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10.5 Stakeholder Satisfaction

From September 2007, the HNG Business Stakeholder Engagement team, part of Business Change, carried out monthly interviews with selected key stakeholders to measure the ongoing level of satisfaction of these individuals with the HNG Programme. By measuring stakeholder satisfaction the Programme Team was able to ensure that stakeholder requirements were being met and to allow for them to identify and take appropriate action to improve satisfaction when necessary.

Up to 30 stakeholders were identified for interview at any one time. The stakeholders interviewed were changed during the course of the programme to reflect changes in personnel and the business organisation. Each stakeholder was scheduled for interview once every three months with 8 interviews targeted for completion in each month. As stakeholder participation was on a voluntary basis, the actual number of interviews completed each month did vary. To maximise the number of questionnaires completed each month, if a stakeholder was not available for a face-to-face interview, he/she was able to complete and return a paper questionnaire.

The overall level of stakeholder satisfaction for the duration of the programme is summarised in the table below.

Statement	Programme Average	Programme Median	%Always or Usually
I feel the Programme understands what's important to me.	3.5	4.0	94%
I believe the Programme team is open and honest with me.	3.4	3.0	95%
I find it easy to make contact with the Programme team.	3.5	4.0	98%
I feel the Programme team acts on any issues and concerns raised and I am kept up to date on how they are being handled.	3.6	4.0	95%
I receive timely communications about HNG that are accurate and relevant to me.	3.6	4.0	91%
Overall	Programme Average	Programme Median	%Average score 3.0 or higher
Average score for all statements	3.5	3.6	87%

11 End of Programme Analysis

???

12 Programme Closure

Closed down of Programme Governance for HNG Release 1.

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Title of meeting	Main Purpose	Date of final meeting	Comments
Workstream / Strand Lead Team	For Workstream / strand leaders to provide an update on their areas to the Programme Manager and peers and for the PM to share updates and information for cascade. Promotion of cross-strand working.	22nd September 2010	Internal agreement to initiate Programme closure activities. Agreed to seek authorisation from stakeholders.
Programme Board	For the Programme Manager to provide a monthly update on HNG R1 to the Programme Board.	27th September 2010	Authorisation granted to proceed with the closure of HNG R1 Programme.
Joint Steering Board	For Fujitsu (supplier) and POL to provide Programme updates, discuss key issues/concerns and formulate mitigation or rectification plans.	16th September 2010	Joint agreement to initiate Programme closure activities. Agreed to seek authorisation from stakeholders.
Executive Team Sub Group	For the Programme Manager to provide a monthly update on HNG R1 to the Executive Team Sub Group.	21st September 2010	Final Programme update issued to BPMO for ET Board report.
Delivery Working Group (DWG)	For Programme Managers to provide an update on the status of projects / programmes to the Programme Delivery Manager.	29th September 2010	Acknowledged that Programme Board had granted authorisation for HNG R1 to commence close down activities.

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Internal RAB	For the Business to provide agreement for HNG R1 to move through the different stages of the Programme once the Programme team has provided assurance of readiness to proceed.	4th October 2010	Agreement to close the HNG R1 Programme reached.
Joint RAB	For both parties, POL and Fujitsu, to provide agreement for HNG R1 to move through the different stages of the Programme once the Joint Programme team has provided assurance of readiness to proceed.	29th June 2010	Authorisation granted to proceed with full HNG R1 rollout.
Input Review Forum (IRF)	For the Business to provide agreement for HNG R1 to move through the different stages of the Programme once the Programme team has provided assurance of readiness to proceed.	23rd June 2010	Authorisation granted to proceed with full HNG R1 rollout.
Project Delivery Framework Gate 7	Project/Programme Closure	6th October 2010	Agreement to close the HNG R1 Programme granted, with caveats regarding handover to BAU batons – see section 11.1
Project Delivery Framework Gate 8	Post Implementation	TBA	

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Acceptance Gateway 6	Contractual acceptance gateway.	29th December 2010	

Embed End Programme Plan as at 29/09/10

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PID ESR\HNG project

12.1 Handover to BAU

[**Description**: This section captures details of activities handed over to BAU (list handover documents signed off)]

Activity	Programme Owner	BAU Owner	Handover Date	Status
Acceptance Gateway 6	Noel Beaton	Liz Tuddenham, Service Delivery Support	31/10/10	Green
Known Issues Log	Barry Evans	Antonio Jamasb, Live Service & Business Continuity, SD	31/10/10	Green
Quality of Service Process for Branch Router	Andy Jacques / Fujitsu	Dave Hulbert, Systems & Direct Channels Manager, SD	Forecast 01/12/10	Amber Managed in IT until delivery of working process by Fujitsu
Horizon Online™ Conversion from ISDN to ADSL	Jacqui Cave	Dave Hulbert, Systems & Direct Channels Manager, SD	30/01/11	Draft POL/HNG/IMP/004
Horizon Online (Release 1) Document Handover Agreement (Including Archiving)	Lobna Mohammed	Service Delivery, IT (BIL) Operational Baseline	31/11/10	Green Managed by IT to deliver into Service Delivery for AG6

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Post Implementation Review (PIR)	Will Russell	Bruce Tann, Finance	TBC	TBC

12.2 Archiving

The management and storage of HNG Release 1 documents is covered by the Horizon Online (R1) Documents Handover Agreement.

In summary,

12.2.1 HNG Release 1 Products

- *Contractually Controlled documents (CCD's)* will be owned and managed by the POL commercial team. Main contact will be: Matthew Loughran (Fujitsu Contract Manager) As of the 1st of November 2010 Liz Tuddenham (Service Delivery Support), and Matthew Loughran will take ownership of all CCD's. Fujitsu will send CCD for review to the IT Controlled inbox for review. However once a CCD completes its review cycle and is approved and base lined, Fujitsu must send the base lined copy to Matthew Loughran.
- *Solution Baseline Document Set (SBDS).* As of the 1st of November 2010 Liz Tuddenham and Matthew Loughran will take ownership of all SBDS's. Fujitsu will send SBDS's for review to the IT Controlled inbox for review. However once a CCD completes its review cycle and is approved and base lined, Fujitsu must send the base lined copy to Matthew Loughran and David X Gray (IT Strategy and Architecture).
- *Security Documents*: These will be owned by Sue Lowther (Security, Principal Design Authority), Updated versions will be uploaded onto the BIL or the Horizon Next Generation Programme database on Lotus Notes
- *Low Level Designs (LLD)* These documents will be kept in the BIL (Business Information Library) on the Sharepoint site. The existing versions of LLD's have been uploaded onto the BIL under Solutions Design and the Principal Design Authority as the owner.
- *High Level Designs (HLD)* These documents will be kept in the BIL (Business Information Library) on the Sharepoint site. The

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existing versions of HLD's have been uploaded onto the BIL under Solutions Design and Principal Design Authority as the owner.

- *Testing Documents*. These documents will be kept in the BIL (Business Information Library) on the Sharepoint site. Tonvane Wiswell (Principal Testing Manager) is the owner.
- *Operational Level Agreements (OLA).* These documents will be kept in the BIL (Business Information Library) on the Sharepoint site.
- *Application Interface Specifications (AIS).* These documents will be kept in the BIL (Business Information Library) on the Sharepoint site and Principal Design Authority as the owner.
- *Technical Interface Specifications (TIS).* These documents will be kept in the BIL (Business Information Library) on the Sharepoint site Principal Design Authority as the owner.
- *POL Produced Documents:* Documents describing procedure or service changes which have already been produced and handed over to BAU will be archived in the BIL.

List of internal POL documents, archived on the BIL or managed by Service Delivery:

Activity	Programme Owner	BAU Owner	Handover Date	Status
Horizon Online Branch Router Installation Document	Lorraine Hall	Kendra Dickinson, Relationship Manager NBSC, Service Delivery	04/09/09	Delivered POL/HNG/SPE/007 v1.0
Horizon Online House Style for UI Text Authoring	Julie Turnock	Reference Data	16/07/09	Delivered POL/HNG/GUI/001 v1.1
Horizon Online Day to Day Style Guide for UI Text	Julie Turnock	Reference Data	16/11/09	Delivered POL/HNG/GUI/002 v1.0
Horizon Online (HNG) Help, Operational and	Karen White	Internal Communications	30/10/09	Delivered POL/HNG/REQ/014 v1.0

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Maintenance Acceptance Handover				
Session Suspend Process	Alina Lingard	Andrew Winn, Relationship Manager, P&BA Cathy MacDonald, Fraud & Conformance Manager, P&BA	08/10/10	Sign Off and final version of document completed 08/10/10
Data Centre Business Continuity Test Scripts	Andy Jacques / Fujitsu	Gary Blackburn, Live Service & Business Continuity, SD	09/09/10	Delivered
Data Centre Technical Assessment for Resilience (incl any exclusions to resilience)	Peter Stanley	Gary Blackburn, Live Service & Business Continuity, SD	09/09/10	Delivered
Security Reports (incl. Patch Management)	Ian Trundell	Security	009/09/10	Delivered
Capacity Management Reporting and Process	Ian Trundell	Antonio Jamasb, Live Service & Business Continuity, SD	15/10/10	Delivered Part of Service Management Review (SMR)
SLA and Service Review Book	Andy Jacques / Fujitsu	Mark Weaver, Systems & Service Improvement Manager, SD	09/09/10	Delivered Part of Service Management Review (SMR)
Statement of Obligations	Andy Jacques / Fujitsu	Matthew Loughran, Contract Management Specialist, Service Delivery	31/10/10	Delivered
Balancing Guidelines for Branches	Andy Jacques / Fujitsu	Kendra Dickinson, Relationship Manager NBSC,	30/09/10	Delivered Memo views were agreed to be sent each week for 4

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		Service Delivery		weeks to insure branches contacting NBSC were kept to a minimum.
Branch Discrepancy Process	Alina Lingard	Kendra Dickinson, Relationship Manager NBSC, Service Delivery Andrew Winn, Relationship Manager, P&BA	18/10/10	Delivered Sign off received from P&BA and NBSC
GlobalUser Process for Romec, BFPO and POL users	Alina Lingard	Alan X Simpson, POL IT Security Kendra Dickinson, Relationship Manager NBSC, Service Delivery	18/10/10	Delivered Sign Off received by Alan X Simpson and Kendra Dickinson.
Router Acceptance Forms	Barry Evans	Matthew Loughran, Contract Management Specialist, Service Delivery	04/11/10	Delivered
Defects Process	Noel Beaton	Matthew Loughran, Contract Management Specialist, Service Delivery	31/10/10	Delivered
Deferrals Process	Noel Beaton	Matthew Loughran, Contract Management Specialist, Service Delivery	31/10/10	Delivered
Acceptance Incidents Process	Noel Beaton	Matthew Loughran, Contract Management Specialist, Service Delivery	31/10/10	Delivered
Future	Noel Beaton	Business	31/10/10	Delivered

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Enhancements Process		Solutions Managers		
CTX Screens	Ann Cruttenden	Antonio Jamasb, Live Service & Business Continuity, SD		Delivered

12.2.2 Collateral for audit purposes

Programme minutes, plans, organisation charts, historical documentation and miscellaneous Programme artefacts will remain in storage on the Lotus Notes Database, "Horizon Next Generation Programme", for audit purposes. Individuals who currently have access to the Lotus Notes database will continue to do so going forward. Therefore there is currently no need to move the content under Programme and Office Control to another location.

Access will be restricted as some of the information stored in the database is business sensitive.

13 Post Programme/Post Implementation Review

[**Description**: Insert Post Programme Review data and plan]

Will Russell and Bruce Tann to Complete, including Costs