

GRO

Horizon Error Root Cause Project

Final Report

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1.0 Management Summary

1.1 Background

The project was sponsored by Alan Barrie, PON Operations Director, on behalf of the NRO Board. It was established to investigate the increase in error levels when offices migrated to the Horizon automated platform. The impact in TP was the need to recruit extra staff to deal with these errors. A Business Case produced by the Automation Directorate showed a cost of £500k for the extra staff against the significant risk of not settling accurately with Clients. The key deliverables of the project were to find the root cause, identify solutions to reduce the levels back to pre migration levels or below and either implement where practical and or identify ongoing processes to minimise this effect.

1.2 The Approach

The project duration was three months, lead by a dedicated senior manager. The approach was through a virtual team, of an empowered Steering Group (roles and responsibilities detailed in Appendix A), and a workshop involving First Line users. The project drew from and built on the work done by the Data Integrity Project, one of the National Roll Out preparation projects.

The Steering Group starting point was to take the top ten categories of error from the Transaction Accuracy Measurement Database, which is held and analysed in Transaction Processing. An explanation of this process is at **Section 4.2.**

The Steering group commissioned the Root Cause Workshop, agreeing the purpose and proposing the membership. The workshop took the “**whats**” and looked at the groups of products within the categories and asked the question **why**.

1.3 Findings

The root causes for the largest category ranged from;

- balancing procedures not clear
- reversal process too difficult
- not sure what screen they are in so do not input the figure
- not being aware until much later that they have done it incorrectly
- icon layout different between screens in serve and IN Rem
- tired at the end of the day

There is no one root cause to explain why postmasters make an error. Having performed root cause analysis on all the categories the causes could be clustered under eight groups; System Related, Training, Human Computer

Interface, Process/Procedures and Conformance, Communication, Business Change, Management Information and Helpline.

An analysis of errors being made by office type was undertaken and shows that the relative error rates have not changed significantly in any one office type, they have increased across the board.

1.4 Solutions/Recommendations

The solutions were generated and prioritised by the Steering Group and eight clear solutions were recommended. They are summarised at **Section 5**.

In addition a number of simple solutions have been implemented.

- A series of work aids covering - The most frequently asked questions on the Helpdesk along with their answers, The top ten errors and how to avoid them, Handy Hints and Tips - have been produced and are being passed through the process for feeding into Counter News.
- Comments have been fed into the team who produce Horizon Balancing guide for future improvements.
- Comments fed to Steve Gibbs to assist on his work outlining the principles of how to operate out of hours stock units.

The Steering Group will come together once more in November to measure the success to date and identify how any outstanding actions can be reported through to the NRO Board to ensure that they are updated and cleared. A matrix at **Appendix E** describes how potential initiatives have an impact on the reduction in errors.

1.5 Conclusion

In conclusion the activities and initiatives described in recommendations/solutions will reduce the errors to below the manual baseline once roll out is complete, provided, and this is key, the solutions are effectively deployed. The latest trends are showing an improvement in the level of increase of errors when outlets first migrate and for the first time we are seeing a shortening in the length of the learning curve. The conclusion that can be drawn on this is the impact of the preparation projects done before National Roll Out.

This piece of work did not look at the fundamental issues of why we get any errors at all. This is within the scope of the ERA programme with it's design principles to simplify transaction, remove the Cash Account and maintain a single stream of data. This piece of work has not been able to evaluate the impact of the CSR+ upgrade.

The board are asked to sponsor;

- £10,000 to commission Research Services to undertake the Observation Study. This will take account of the findings within the HEB study and looks specifically at how good and bad outlets are using the User and Balancing Guides. These guides detail what the standard procedures should be.
- £6,500 for CM2 resource for three months to prepare the small business cases and co-ordinate the activities.

1.6 Summary of Solutions and Recommendations

Ref No	Cluster Heading	Root Cause	Solution	Potential Impact on Errors
5.1	Process/ procedure/ conformance	Forms and Supporting Documentation not aligned with Horizon screen formats	Short To medium term - resource to look at all forms and align to system and link into the work being carried out by the Service Delivery Planning Team. Long term - pass to ERA to migration stages build in.	This has the potential to reduce the incremental errors by 10% or £30k in costs. Resource is required to prepare a simple business case, to target the rogue forms and identify production and distribution costs
5.2	Process/ procedure/ conformance	No standard way to do things, no process to share best practice.	Observation Study, building on the work done by John Evans, conducted by Research Services. To look at how the User Guides and Balancing guides which detail the processes are being used in good and bad offices.	The study would cost £10k. Resource would be needed to evaluate the findings and produce a business case to deploy the recommendations. If cost effective, a further 10% reduction in errors is realistic.
5.3	Process/ procedure/ conformance	Complex and different procedures for products	Product Design in TP needs to take account of impact on potential errors when assessing options for new products. Solution is accepted and is to be deployed.	Short Term - none Medium Term - no significant increases in errors as a result of new products. Long Term ERA to pick up and design errors out
5.4	Process/ procedure/ conformance	Not being told early that error has been made and information not always easy to understand	Transaction Accuracy Measure will explain the cause of the error, the timing is still constrained to when the error has been resolved.	The work of the TAM is assessing impact on errors and it should not be double counted here.
5.5	Process/ procedure/ conformance	No policy on conformance	The Business Develop a policy backed up by a harder approach to non conformance	This measure is dependant on the previous solutions being in place and builds on the TAM improvement activity.
5.6	System Related	Icons in different places or different naming regimes	Service Improvement Process to be defined and deployed. TP already engaged with BSM	Proper impact assessment on Service Improvements will identify reduction in errors along with the cost of the change
5.7	Training	Dissatisfaction with Training	Transaction Processing and Business Service Management work jointly to identify problem offices & to ask the residual HFSO's in the territories to give refresher training. This approach has been agreed within TP/BSM.	The cost benefit of this approach will need to be evaluated. Part of the joint work will be to identify and prioritise target outlets and assess the impact on a small number of outlets. TAM will play an integral part in informing decision making.
5.8	Business Change	Conflicting / missing KPI Targets e.g. Increase Sales, reduce waiting times both at the detriment to back office procedures where	The introduction of the Transaction Accuracy Measure onto the scorecard will allow a balance to be made against the other KPI's	Transaction Accuracy Measure has it's own business case to deliver benefits.

		errors occur.		
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2.0 Background

In September 1999 during Live Trial and as part of the Data Integrity Preparation Projects, a team was set up to undertake a Root Cause Analysis Workshop with the aim of establishing the cause of errors being generated by the live trial offices. This group of people looked at the nine main error areas and identified some solutions to them. They were looking for short term solutions that could be implemented before National roll out. Unfortunately no measures were put in place to monitor the effectiveness of these solutions, and due to major business reorganisation (SCS) people have moved on . Therefore there was no body of people left to take this initial piece of work forward .

At week one of the new financial year as the roll out of Horizon continued, Post Office Network (Transaction Processing) became increasingly concerned at the volume of errors being generated by automated outlets, given the impact on clients, customers, costs and the integrity of business data. The error baseline of 0.63 errors per office continued to rise to an unacceptable level (see **Table 1.**). A business case was produced with the help of the Automation Directorate for £0.5k to cover the anticipated extra costs of dealing with the increased errors and extra staff are being employed.

Table 1. Horizon errors generated in a sample 4 week period, as Roll Out gathers pace.

	Week 01 27th Mar 00	Week 02 03rd Apr 00	Week 03 10th Apr 00	Week 04 17th Apr 00
Number of Horizon Errors	4692	6927	6369	7285
Number of Horizon Offices	4401	4719	5044	5370
Errors per Horizon Office	1.07	1.47	1.26	1.36

Transaction Processing needed to bring in extra staff to clear the increased volume of errors. Twenty four of these extra staff were in post at April, and based on trend data, the forecast at that point in time was for an additional requirement of up to 40 staff by September 2000. The length of the learning curve was also giving cause for concern and was at this time not expected to return to baseline until 20 weeks after conversion.

It was therefore decided to undertake a short term project to look at initiatives that could be implemented to reduce the level of errors being generated and the length of the learning curve.

The project was sponsored by Alan Barrie, Operations Director, on behalf of Don Grey, Horizon National Roll Out Project Manager.

3.0 Project Terms of Reference

3.1 Scope

- To analyse impact of previously identified solutions from the Data Integrity Project that were implemented by Conformance and Retail Network Project.
- To analyse current NRO error data and identify trends, issues and problem areas for further root cause analysis.
- The cross functional team will take the output of the above analysis and:
 1. take error data through the root cause process to establish potential solutions
 2. review the impact of previous solutions and identify any areas where additional activity/action is required
 3. develop solutions and action plans for implementation
 4. to consider root cause/solutions/actions for those offices already migrated as well as those planned for future.
- To produce action plans detailing all activities required through the life of the error root cause and reduction Terms Of Reference.

3.2 Specific Objectives

- To implement solutions which reduce the error levels to or below the pre-Horizon baseline.
- To implement solutions which shorten the length of the learning curve.

3.3 Deliverables

- 1 Analysis to understand trend of error levels and the products or problems which are causing 80% of the errors.
- 2 Workshop analysis to determine potential root causes and amendment of previous solutions.
- 3 Identification of potential solutions and decision of which solutions to implement - by end of Aug 2000.

- 4 Identification of future process to maintain error level - by end of Sept 2000.

3.4 Responsibilities

Sponsor:	Alan Barrie on behalf of NRO Project Board
Project Manager:	Joyce Daggett
Research Services:	Kjetil Fuglestad
BSM - Incidents/problem management:	Phil Turnock
TP Ops front line:	Julie Dart, Problem Management Chris Clarke, Horizon Liaison Manager
Horizon implementation:	Janice Rowell
HORN:	Peter Pycock, Keith Jones
Member for the Operating Process team:	Jim Watkin
Lead for Workshop:	Joyce Daggett, TP Project Manager Lynn Kelly, Head of Development

4.0 The Approach

Representatives for the cross functional team were nominated by their respective line and the first meeting was called for the 8th June 2000. At this meeting each individual was asked to sign up to their roles and responsibilities within the forum (see **Appendix A**) and the team purpose was agreed.

A presentation to the NRO board was undertaken on the 26th June 2000. We asked them for:-

- Support when implementing solutions.
- Continued support for the cross functional team.
- Removal of barriers.

4.1 Team Purpose

- To take error data through the root cause process to establish potential solutions.

- To review the impact of previous solutions and identify any areas where additional activity/action is required.
- Develop solutions and action plans for implementation.
- To consider root cause solutions/actions for offices already migrated as well as those planned for the future.
- To implement solutions that reduce the error levels to or below the pre-Horizon baseline.
- To implement solutions that shorten the length of the learning curve.

The steering group decision was to hold two workshops, one to be a root cause forum involving the users and the second to be a solution generating workshop consisting in the main of the steering group.

The steering group were asked to nominate users for the root cause analysis forum, it was agreed that the workshop should include two Branch managers and two sub postmasters one from each of the two HORN areas represented, one Horizon Field support, one Franchise manager and one rural RNM.

4.2 The September 99 Root Cause Forum

The outputs of the September 99 error root cause forum were examined. Solutions had been implemented however because no measurement process had been developed and other contributory factors had impacted on errors it was now impossible to be clear on the success of any solutions. The error areas which were examined in September with the exception of one, were all still relevant and appeared again in May's error stats. The Root Cause user group would focus on the May error statistics.

Explanation - Each time an error notice is investigated to resolution, what caused the error is recorded on to a database now called Transaction Accuracy Measure. For example, the largest category of error (52%) across CLASS and PIVOT is where either the Cash Account or supporting document has a figure missing or it is different to it's matching entry. The top ten categories cover 80% of all errors. Effectively the database describes **what** the postmaster did to create the error.

4.3 The Root Cause User Workshop

The workshop was held on the 23rd June 2000 the purpose was defined as:-

“Using the statistics, data and information provided on the top ten errors, by volume, examine each error type and using root cause analysis tools. Drill down to establish the fundamental base of the problem. Document findings for the Root Cause Solution Workshop.”

Using root cause analysis tools the User Workshop delved into the reasons behind each error type (see **Appendix B** for the error types and volumes that were looked at by the workshop).

Root Cause Maps were generated from the analysis (see **Appendix C**) and these maps were then used to pull together areas of cause under each of the following headings :- System, Process/Procedures and Guidelines, Training, Human Computer Interface, Horizon Field Support, Communication, Horizon Balancing Guide, Information and forms design, Business Change, Helpline. All of the information was then used by the Steering Group Solution Workshop to develop an activity plan.

4.4 The Solution Workshop

The solution workshop was held in Chesterfield on the 6th July 2000. The causes for each of the error types was sifted and prioritised. Solutions were identified and the activity necessary to deliver them was mapped out on to an activity plan with assigned owners and target dates (see **Appendix D** for the latest version of the plan). The activity plan was monitored by two further Steering Group meetings on the 25th July and the 29th August.

5.0 Solutions and Recommendations

5.1 Forms and Supporting Documentation

User feed back suggests that we have in use a high percentage of forms that do not align to the Horizon system. In some cases examples were given where a form gives information that needs to be keyed into the system in an opposite order to the screen used to capture the data, thus creating a high risk that the information will not be keyed correctly by the office. It was never part of Horizon’s scope to look at forms and supporting document design and we believe that this is a gap.

It is recommended that Post Office Network dedicate project resource to look at all forms and accounting supporting documentation, with a view to beginning to bring the forms in line with our automated system. It is also recommended that user input is gained at the design stage and at the testing stage to ensure that they are user friendly. This could be done ahead of ERA on the forms which cause the biggest problems. Some work would need to

be done to identify these. Two examples we were given in the User Workshop were the DPI schedules and the Remittance advice notes.

Short to medium term -(3 months CM) resource to prepare a simple business case and to do cost benefit analysis i.e. which forms are causing highest amount of errors and what would be the production and distribution costs. This could then be linked into the work already started by the service delivery planning team.

Long term pass into the ERA project for building into the design. We need to design out errors.

5.2 Observation Study -Benchmarking

There is no process in place to identify and share best practice across the network. Outlets that have adapted quickly to the automated environment and are operating with low error rates are not able to share their learning, work practices and methodology. It is thought that an observation study carried out in a sample of offices may significantly improve our understanding of why and how Horizon errors are made and enable the territories to spread best practice across the network. Unfortunately the time-scales of this project have not allowed such a study to be carried out.

It is recommended that an observation study (building on the work done by John Evans on human error) be conducted by Research Services to look at how the various user and balancing guides are being used in good and bad offices. What practices do the good offices use which helps them to avoid errors?

It is estimated that carrying out a study in twelve outlets (6 good and 6 poor offices) would cost around £10,000 and take between 4 to 6 weeks to conduct. This would provide the input for a business case to deploy the recommendations in the territories. If cost effective a further 10% reduction in errors is feasible.

5.3 Product Design

The way that we design products and their back end accounting processes can lead to errors. There are products that are more error prone than others and there are products that generate errors which are complex and more difficult to clear. For example using the automated payments line for the personal banking product makes any Personal Banking errors difficult to identify and hence they take longer to clear. Whilst the Transaction Processing average error clearance rate is judged to be 6.2 errors per hour it is thought that on the Automated Products team the clearance rate is approximately 1.2 errors per hour.

There appears to be no statistical based method for calculating expected errors on proposed new products. The method currently in use is to ask Transaction Processing team leaders. In our view these people may not have the wider view necessary and some tie up with errors produced needs to be written in to the New Product Accounting Model. It is highly likely no account of the increased error levels being experienced across TP is being taken into account at the product development stage.

It is noted that Product Feasibility's are still being written for the manual environment, and that the operational business change process is not clear regarding timescales for the individual steps and tiers within it. Only overall lead times are available and appear to be variably understood. Problems being encountered include products being launched or amended without adhering to the Operational Business Change Process thus making it impossible for the offices to sell the products correctly. They then invariably use the complex process of selling from the suspense account and this causes errors.

It is recommended that Transaction processing re - examine the methods currently in use in their development team to calculate expected error volumes on new or changed products. The aim should be to implement a clear documented process which is realistic, takes account of the automated platform and can be applied across generic product types. This has been passed to Transaction Processing and work has already commenced on it.

5.4 TP Internal Processes

It would appear that Transaction Processing no longer proactively seek to prevent or drive down errors. This is in part due to:-

- a) The business reorganisation under SCS has meant that Transaction Processing's role has changed to that of a deployment unit. Transaction Processing is not a shaper of policy or business initiatives. Therefore Transaction Processing no longer play an active role in sub postmaster road shows or federation conferences etc. Where in the past much good work on error reduction was done through partnerships with the territories we now need to understand the role of the operating process in error reduction. We believe that this should be taken forward as a joint action between Transaction Processing and Transaction Accuracy Measure Improvement Group (via the Operating Process Team).
- b) The large increase in error volumes being experienced since roll out has required Transaction Processing to fully concentrate on the application of it's resource to error clearance and maintenance of data integrity.

There are pockets of proactivity taking place in Transaction Processing where teams have derived their own help sheets and have started a telephone campaign on some offices, for instance the Powerkeys, Parcels and Promotions team try to ring ten offenders of manual completion of table 12 per week. Such activity exists in isolated pockets, there is no co-ordinated approach.

It is recommended that PON begin work to proactively reduce errors through a program of support and education. That a forum be established to continue and build on the work commenced as part of this project. The forum to have representatives from the Operating Process, the Territories, National Business Support Centre, Transaction Processing, the forum to develop a co-ordinated approach to error reduction/process improvement and feed into the next phase of Transaction Accuracy Measure, via Transaction Accuracy Measure Improvement Group. The activity will also need to be linked with the problem office process in National Business Support Centre, and the Service Improvement Process.

5.5 Conformance

~~The business does not have a standard accounting process. This leads to individuals adopting their own methods of completing the weekly balance. Although the Horizon balancing guide is clear people often don't use it. Much hard work is done throughout the business developing documents and guides to assist in the balancing process and to aid error prevention, however much of this is wasted work as some offices simply disregard them. We need to define and adopt a standard approach to balancing and enforce it with a sound conformance policy. The territories and the retail line could do much to assist in this area if the will is there to drive down costs and introduce conformance. Through analysis and investigation during the project it was identified that the majority of the errors could be assigned to user non-conformance, attributable to lack of processes & procedures during the 'stock unit & cash account' events, e.g. individuals completing cash account using their own processes which can often lead to key data being missed, thus creating errors (non accounting data).~~

~~Though to date there has been numerous piecemeal attempts to address this problem, with the development of documents and guides to assist in the balancing process and to aid error prevention. Much of this is wasted work as some offices simply disregard them, or don't have time to read and digest the contents.~~

The business needs to develop a policy backed up by a harder approach to non- conformance. The group strongly recommend that a 'task force' is established to co-ordinate and define Post Office Network's preferred process & procedure for completing both 'stock unit & cash account balances' in a sequential/logical form, ensuring all data (without exception) is captured using the Horizon system. The agreed process should then be

incorporated into 'counter operations manuals' and 'training briefs' with a clear directive of being mandatory, with procedural audit and the retail line ensuring conformance is maintained during site visits. The group would need to take feeds from the observation study and would need to link into the Transaction Accuracy Measure Improvements Group.

The benefits of a standard defined process will provide an eventual 'win' solution by driving down cost and ensuring conformance - "The Horizon system has been designed in a systematic way, therefore it is vital that the users operate it using a standard systematic approach."

5.6 Service Improvement Process

During the course of the project we uncovered various pockets of activity taking place, one of which is the Service Improvement Process. We discovered that a number of Service Improvements were logged but there was no clear process to follow on how these would be evaluated, sifted and progressed through to conclusion.

It is recommended that the Service Improvement Process be fully defined, documented, deployed and embedded throughout the Business. This would enable all areas and individuals to be clear on their responsibilities within that process. It is also recommended that Transaction Processing are involved in the impact assessment of Service Improvements in order to ensure delivery of maximum business benefits through the reduction of errors. Dialogue has already commenced with Transaction Processing, Business Service Management and the Operating Process.

It is recommended that a Service Improvement be registered with input from the Transaction Processing error clearance team to make the Personal Banking icons more user friendly. That icons be grouped by product i.e. one icon for Co-op that is selected to get to a screen with all Co-op icons. At the moment, the screen used for banking products shows icons for multi-products, making it easier for the individual to press the Co-op icon when they should have selected Lloyds. Note With the roll out of CSR+ this Service Improvement has now been made.

It is further recommended that Service Improvement number 7 is pursued via the owner of the Service Development Plan (Nick Beal). This will reduce some Pension and Allowance errors, although further work would need to be done to establish the volume, It is not thought to be high.

It is recommended that Human Computer Interface issues currently logged as Service Improvements be pursued with urgency as, although impossible to quantify, these are likely to have a positive impact on error reduction.

5.7 Training

There is a high degree of dissatisfaction with the training given on Horizon. Users were critical of the 1.5 days dedicated training. Comments such as “it wasn’t long enough,” “too much to take in a short time,” “not tailored to needs as some individuals were conversant with technology some have never touched a computer” were given.

The field support process was criticised for lack of support in all transactions (not all transactions were covered on the day the HFSO was present) and for telling people the wrong way to do things i.e. the suspense account. The training did not test peoples understanding or confidence in using the system, hence we have a number of postmasters who are not at all confident using horizon and this in itself leads to errors in areas such as reversals, creating stock units, balancing and accounting for out of hours transactions to name but a few. Feed back has been given to the National Training Team, and the lessons learned from this must be taken forward into the ERA project.

Work needs to be undertaken to identify the offices still encountering problems 12 weeks after conversion (high error rates, high volume of calls to NBSC) and that HFSO’s be sent into these offices to undertake refresher training tailored to individual needs (see also recommendations in **Section 5.4**). Assuming that 500 offices would need a two day refresher training course, then Travel and Subsistence costs are estimated to be £77.5k. This is based on an allowance of £80 for travel, £70 for a night’s accommodation and £5 incidental allowance per office visit.

National Business Support Centre already identify problem offices by number of calls made to the help line, however concern has been raised that these offices may not be the offices with high error rates in actual fact they could be the reverse, offices who ring the help line to make sure that they are doing things correctly and avoiding errors.

It is recommended that the National Business Support Centre and Transaction Processing jointly commence work to identify problem offices for further refresher training. This joint approach to identify areas of concern could flag up the area and type of support needed i.e. whether the issue is one of more training required or bad practice being used. Transaction Accuracy Measure will play an integral part in the decisions and profiling of problem offices. This approach would also give us the wider business view to enable us to tackle the costs of problem offices being borne by Post Office Network. If the training is successful then savings should be feasible in both Transaction Processing and National Business Support Centre and this should be a measurement of the works success. Transaction Processing are signed up to do this but resource is needed to research which are the genuine problem offices (could be picked up by the resource at 5.1 if authorised) and what savings could be realised if

the training were to be successful. This work also needs to link to the System Improvement process.

5.8 Business Targets and KPI's

Users were keen to point out that the business has conflicting targets. They pointed out the difficulties of operating a new automated system whilst trying not to make errors, serve customers to keep waiting time down and grow sales. **Table 2** shows the impact on our KPI's. You will note that the worst hit area is the error rates, although waiting is impacted short term, this returns within target by the end of a three month period whilst the impact on the error rates continues to be an issue.

Table 2. Impact of Horizon on Business KPI's

	Short Term	Medium Term
	0-3 mths	3 -12mths
Waiting Time	Very negative impact	No significant impact
Staff/Agents attitude	No significant impact	Not known
Customer Satisfaction	No significant impact	No significant impact
Transactional Knowledge	No significant impact	No significant impact
Error Rates	Very negative impact	Very negative impact

It is recommended that those responsible for setting business targets bear this conflict in mind when either establishing any new and/or monitoring current targets. The impact of any new and/or additional targets into the network should bear careful consideration and be fully risk assessed for any potential increase in errors and consequent impact on costs.

The introduction of the Transaction Accuracy Measure onto the scorecard will allow a balance to be made against any other key performance indicators.

6.0 Measurement of the Project's Success

It is strongly recommended that the impact of the initiatives arising from the Root Cause Project is measured on a quarterly basis. To enable this measurement to be carried out an impact calendar has been produced (**Appendix E**). This calendar links initiatives and anticipated impacts, which can be tested by analysing data from the current QPA data base and the forthcoming Transactional Accuracy Measures Database (TAM). It should be noted that there will be a 2-3 month lag in results, due to the necessity of

using cleared errors in the analysis. The key aim of the analysis is to discover which initiatives have been successful and have not.

The analysis will measure the impact separately on offices that have been live with Horizon for some time and newly automated offices. The analysis will also attempt to distinguish between a general learning curve effect and more rapid improvement in error rates caused by specific initiatives.

- **The likely cost of setting up a measurement process is £3k.**
- We have been quoted ongoing analysis costs of £2.5k per quarter, however Transaction Processing believe that once the process is established the monitoring could be carried out in house.

6.1 Impacts of other Initiatives

It should be noted that the project was conducted against a shifting platform of continuing Roll Out and that other initiatives due to take place shortly will or should have a positive impact on error levels (see **Appendix E**).

CSR+ Should impact positively on the error types HP201 Incorrect/nil entry PIVOT and HC201 Incorrect icon selected CLASS, although it should be borne in mind that initially errors may increase.

The system solution sponsored by Transaction Processing (Change Control Notice CCN 631a) to move the Table 12 prompt should impact positively on HP201 Incorrect/nil entry entered.

Through the introduction of TAM throughout the network, consistent reporting of errors has been established and this will help focus the retail line on their poorest performing outlets.

7.0 ECCO+

A report was commissioned some time ago (the Darren Boscoe Report) to undertake analysis of errors in ECCO+ offices. Appendix C of that report provides a list of potential sources of error in ECCO+. The majority of these causes and sources of error have been carried over into the Horizon environment.

It could be argued that as ECCO+ was situated in our larger offices, the high volume of transactions completed by these offices would increase the likelihood of errors. However, although Branch Offices (most ECCO+ offices were Branch Offices) produced slightly more errors per office, the errors per

transaction is much lower than for other office types. This indicates that the rate was not increased by ECCO+ compared to a manual operation.

The relative error rates have not changed significantly since the introduction of Horizon (see Table 3.).

Table 3. Proportion of errors vs proportion of volume

	% of errors (pre Horizon)	% of errors (post Horizon)	% of volume of transactions	% of Network
Branch Offices	7	6	20	3
MSPO/ FPO	10	10	10	5
SPSO	83	84	70	92

8.0 Learning Points For ERA Project

- Launch conformance with the technology
- Ensure that changes to procedures etc.. are done in tandem with system changes
- Less complexity especially around any transaction reversal or balancing processes.
- Get rid of supporting paperwork where possible. Redesign paper work where it is key ensuring that it mirrors the system and is user friendly and as idiot proof as possible. This is necessary through the migration states.
- Improve Human computer interface - icon clarity etc. Design out as much opportunity for Human error as possible.
- Train, train and train again. Ensure training meets needs of all individuals, test understanding.
- Make the Operational Business Change process more flexible and responsive to business needs such as quick product launch.

9.0 Project Costs

	Cost
1 x T/B9	12,000
0.5 x PO	4,700

Post Office Consulting	4,500
T & S	500
Total Cost	21,700

N.B.

T & S includes all travel by project manager and any other travel to workshops claimed against the project by steering/user group members.

Appendix A - Outline responsibilities of members of cross functional team for error root cause and reduction

Horizon Implementation - Janice Rowell

- ↓ Able to take actions back to pathway re: software content/design.
- ↓ Able to take actions to change HFSO procedures/training.
- ↓ Assess actions to change training programme for implementation and take forward to area of responsibility.
- ↓ Conversely able to explain Pathway software releases, HFSO accountabilities and postmaster training content.
- ↓ Able to nominate “experts” for input to Root Cause workshops.

BSM - Phil Turnock

- ↓ Able to take actions to:
 - Amend Helpdesk scripts
 - Change tier 1 and tier 2 procedures
 - Influence Pathway Helpdesk scripts and procedures
- ↓ Able to explain:
 - Helpdesk, tier 1, tier 2 and Pathway procedures
- ↓ Able to nominate front line staff to take part in Root Cause workshop
- ↓ Able to provide any required data to the steering group.

Territory - Peter Pycock and Keith Jones

- ↓ Able to take actions to:
 - Provide steering group with anecdotal evidence/feedback
 - Change RNM procedures/training (if short term and not out of line of Retail Line Review)
 - Change comms with outlets
 - Change RNM visit content
 - Identify cost/benefit of solutions
- ↓ Able to explain:
 - Data available, RNM role, visit content, comms with Outlets
- ↓ Able to nominate front line staff to take part in Root Cause Workshop

Research Services - Kjetil Fuglestad

↓ Able to take actions to:

- Analyse data and produce trends and recommendations
- To measure effectiveness of solutions
- Advise on statistical verocity of any solutions

Operating Process Team - Jim Watkin

↓ Main focus on identifying channels for solutions beyond the project.

↓ Able to take actions to:

- Pass solutions to Sub Process Owners, ERA project, Product Design Principles, Transaction Accounting Measure (TAM)
- Take a judgement of whether short term conformance can take forward.

↓ Able to explain Operating Process Strategy and links to initiatives impacting on.

Project Manager - Joyce Daggett

↓ Able to take and lead actions to:

- Review impact of previous solutions and identify any areas where additional activity/action is required.
- Take error data through Root Cause process
- Develop solutions and action plan for implementation for migrated offices and those planned for future.
- To provide the Head of Transaction Processing with updates and benefit monitoring reports for NRO project board.
- Gain collective sign up from NRO.

Transaction Processing - Julie Dart & Chris Clarke

↓ Able to take actions to:

- Collect data
- Assess cost/benefit of solution
- Change procedures within Transaction Processing

↓ Able to explain:

- Type of errors, implications of errors, input to Root Cause Workshop.

Appendix B - Top 10 Errors by volume for May 2000

CATEGORY	VOLUME	PERCENTAGE
<p>HP201 - Incorrect/Nil Entry Entered - PIVOT</p> <p>Where Postmaster has failed to enter or has entered an incorrect transaction into the Horizon system.</p> <p>Includes errors formerly known as omitted figures / incorrect entry</p>	12057	41 %
<p>HC201 - Incorrect Icon Selected - CLASS</p> <p>Where Postmaster has selected the wrong product.</p> <p>This results in compensating errors on two or more cash account lines.</p> <p>Formerly known as wrong line entry.</p>	4109	14 %
<p>HC202 - Incorrect/Nil Value Entered - CLASS</p> <p>Where Postmaster has failed to enter or has entered an incorrect value transaction into the Horizon system including incorrect reversal transactions</p> <p>Includes errors formerly known as omitted figures / incorrect entry</p>	3370	11 %
<p>HP206 - Manual Amendment</p> <p>Where Postmaster has made a manual amendment that requires corrective action in Transaction Processing but which does not appear as a Class or Pivot error</p>	1022	3 %
<p>HP203 - Incorrect Icon Selected - PIVOT</p> <p>Where Postmaster has selected the wrong product</p> <p>This results in compensating errors on two or more cash account lines</p>	620	2 %

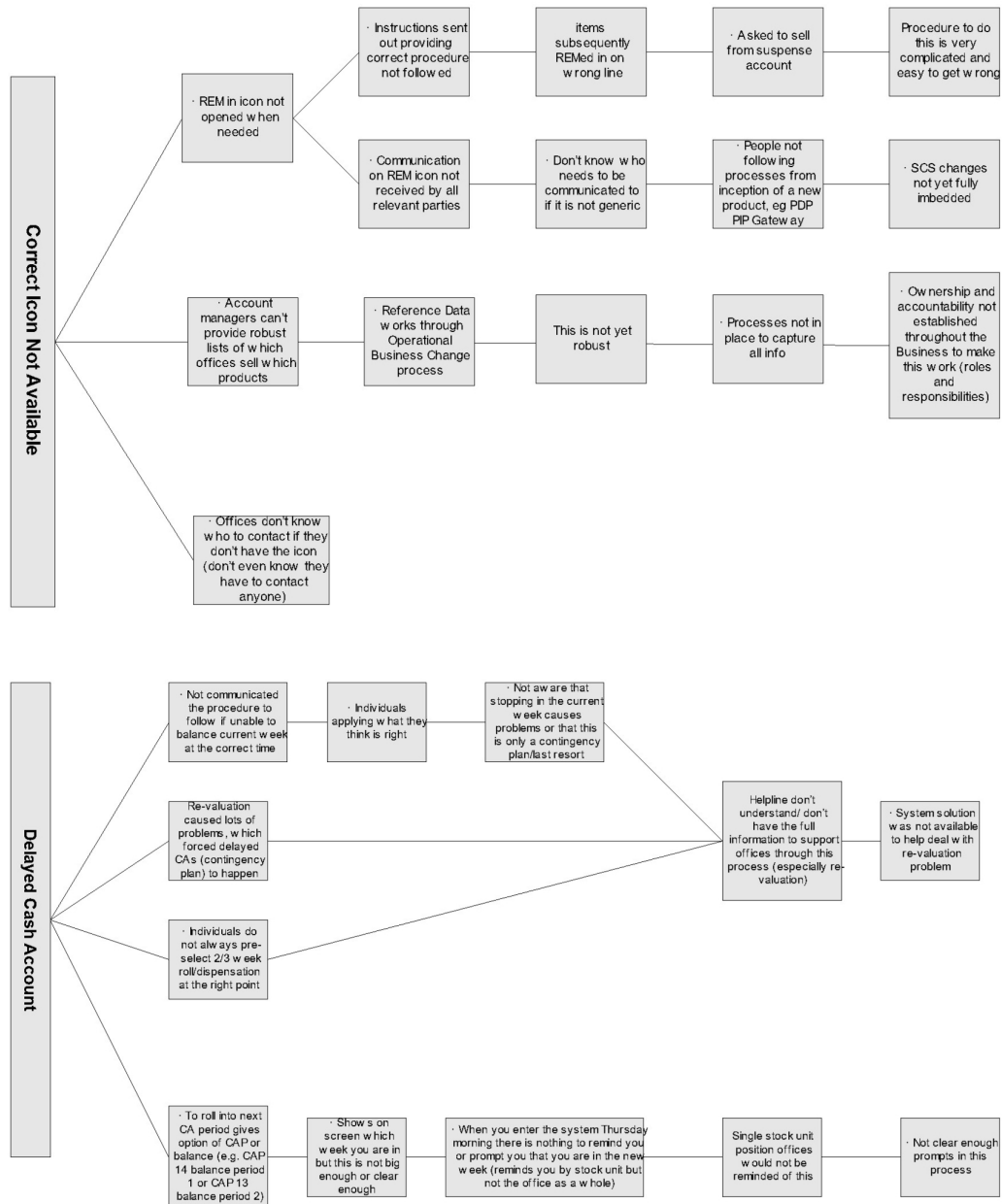
Formerly known as wrong line entry		
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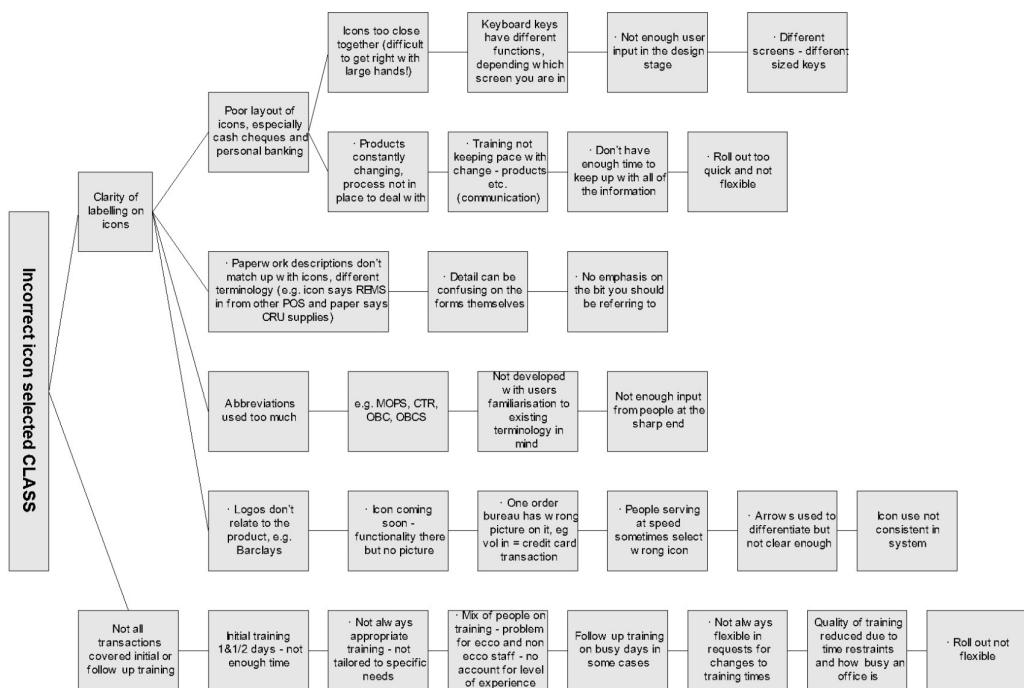
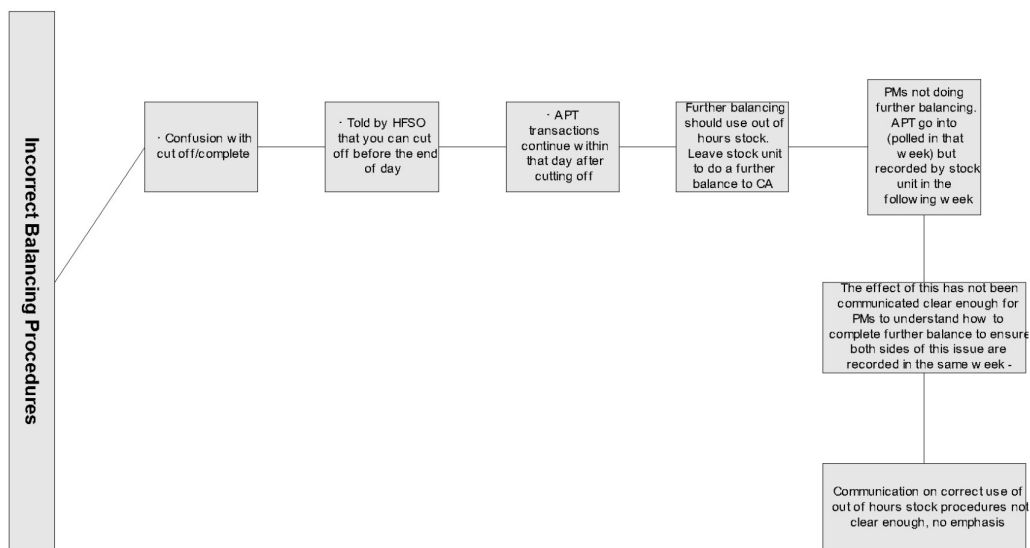
CATEGORY	VOLUME	PERCENTAGE
<p>HP209 - Correct Icon not Available</p> <p>Where Postmaster has been instructed to follow an authorised temporary procedure i.e. told to use an alternative icon for a limited period due to the fact that the correct icon is not available on Horizon</p> <p>e.g. Missing icons for new value Home Care stamps due to a failure in the OBC process</p>	467	2%
<p>HC210 - Delayed Cash Account</p> <p>Where errors are produced due to the receipt of a cash account which contains transactions relating to later weeks</p> <p>e.g. A week 18 account received which contains transaction data for weeks 18,19 and 20</p> <p>Known as a 'back to front' three week account</p>	440	1.5%
<p>HC76 - Incorrect Date on BCV</p> <p>Where Postmaster has entered the wrong date on the BCV which is then processed to a different cash account week from that where the transaction took place</p>	418	1.5%
<p>HN202 - Incorrect/Nil Entry Entered - PIVOT Negative Sales</p> <p>Where Postmaster has failed to enter or has entered an incorrect transaction into the Horizon system.</p> <p>Includes errors formerly known as omitted figures / incorrect entry</p>	282	1%

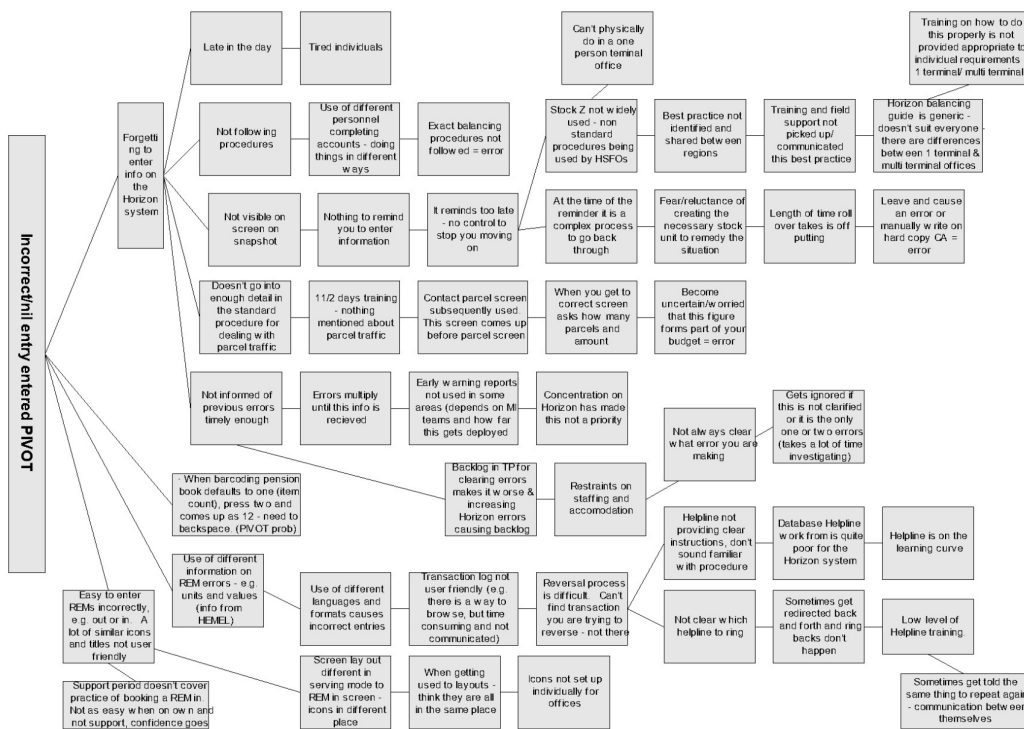
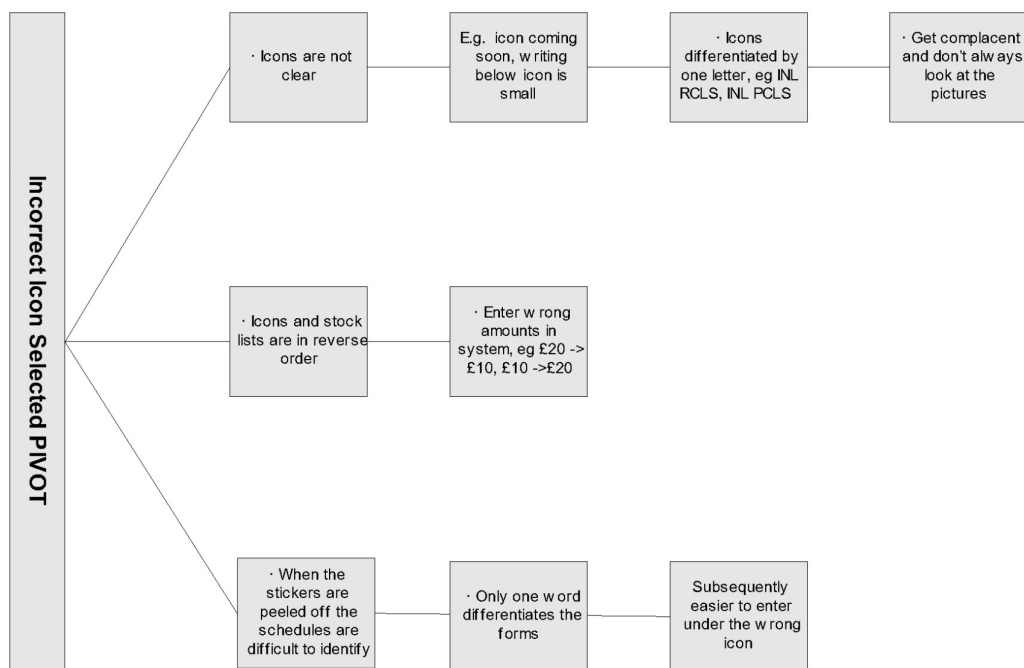
CATEGORY	VOLUME	PERCENTAGE
HC206 - Incorrect Balancing Procedures - Automated Payments Team Where the Outlet / stock unit has balanced and rolled into the next cash account period too early or too late resulting in compensating errors when compared to APACHI information	262	1%
HC07 - No Signature Where the Final version cash account is received in Transaction Processing without being signed by the Postmaster. The cash account is returned to the outlet for signing.	259	1%

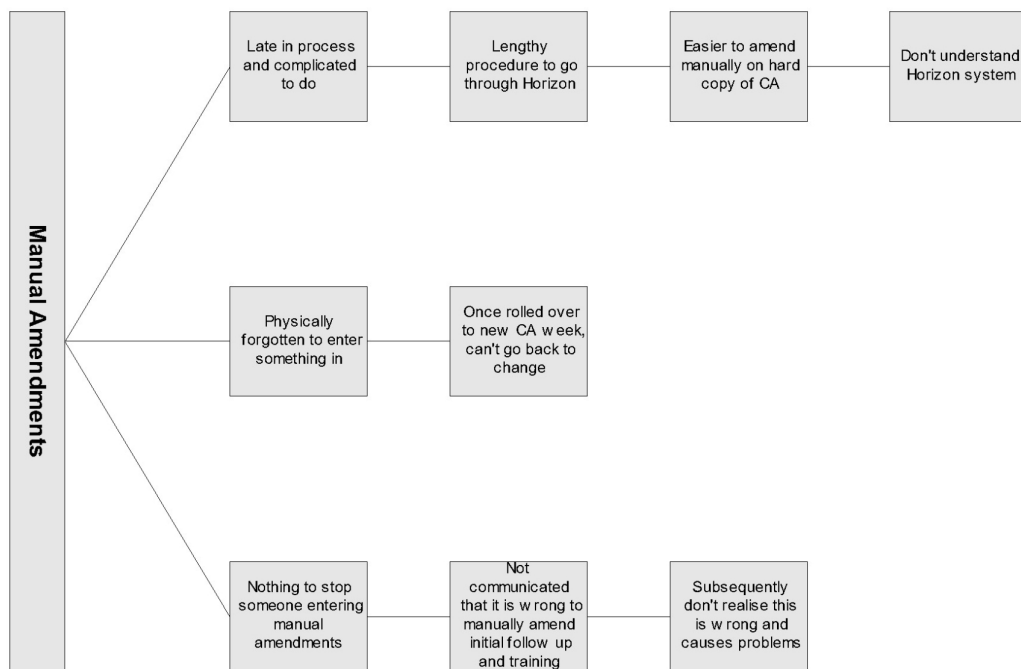
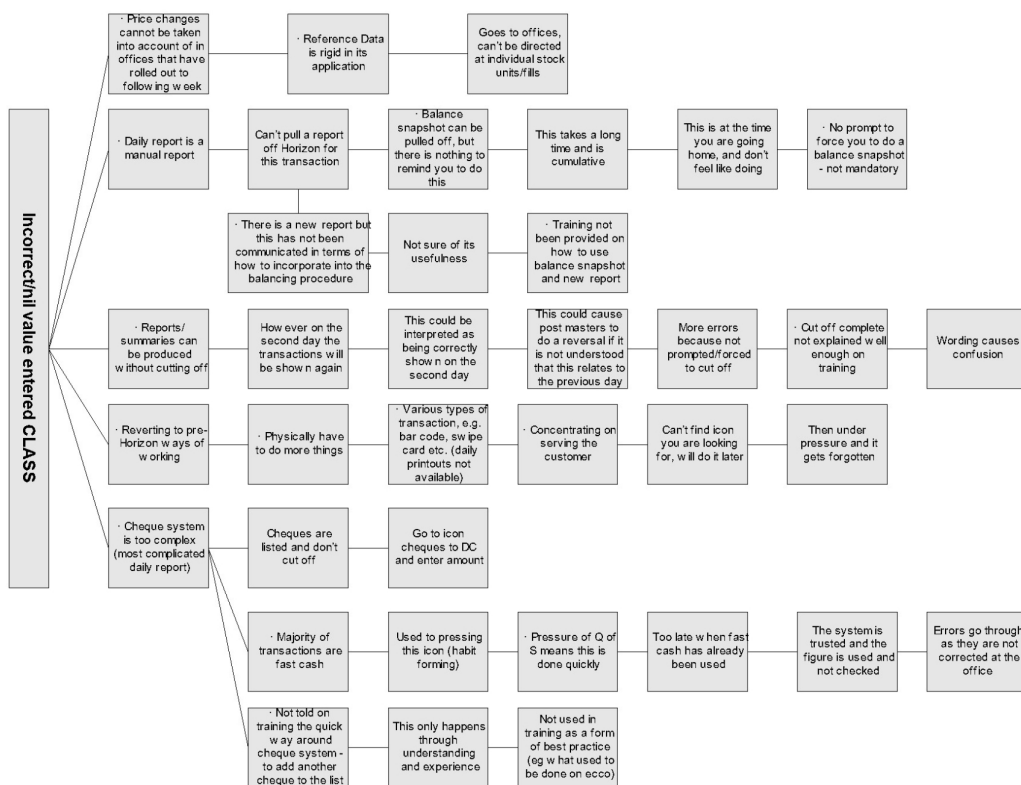
Total number of errors for May 29692

Appendix C - Root Cause Maps, outputs of the User Group Workshop









Appendix D - Steering group activity plan (version 7 @ 11/09/00)

No.	Activity and date raised	Owner	Target date	Status	Outcome
1. Incorrect/Nil Entry PIVOT					
1A	<u>6th July</u> Check knowledge base system within NSBC is accurate in terms of tables 10g and 12. Feed back findings to steering group.	Amanda Booth	25/7/00	C	No significant mention of tables, just that they are mandatory. Queries regarding how to navigate the system to complete them are forwarded to the Horizon helpdesk.
	Report on most frequently asked questions and answers given by the helpdesk	Amanda Booth	25/7/00	C	Report passed to Joyce Daggett and Chris Clarke for further action (see below).
	<u>25th July</u> Take the helpdesk frequently asked Q&As document and format into an output that can be passed down via the retail line.	Joyce Daggett & Chris Clarke	18/8/00	IP	Work completed in TP and amendments comments fed back to Amanda Booth as owner of the information. Ready to publish once Amanda gets back to Joyce.
	<u>29th August</u> Phil to chase with the frequently asked Q and A's doc with Amanda - this doc needs to be in a user friendly format.				
	<u>25th July</u> Are the offices calling the helpdesk on this query the ones making these errors? Get a list of offices who have rang the helpdesk in April, May and June regarding non-accounting data (or general balancing queries), with call dates. Analysis of the above data and pass to Joyce Daggett for circulation to the Steering Group.	Phil Turnock Kjetil Fuglestad	11/8/00 18/8/00	C	Information passed to Kjetil for analysis. KF - yet to do. Who should be highlighting problem offices - TP with helpline connections? (i.e. high errors but not calling helpline). - for consideration in project? JD
	<u>29th August</u> Handy hints and how to avoid top errors docs sent for inclusion in Counter News	Joyce Daggett/ Chris Clarke			

No.	Activity and date raised	Owner	Target date	Status	Outcome
1B, 1C	<u>6th July</u> Management information on errors, ie early warning report is not being deployed. Consider feasibility of using Cash Account check guide via RNM's. TP error process is too lengthy. Look at getting information on errors sooner, particularly for this error and in advance of CSR+. Link into TP, PIT, and error resolution teams.	Joyce Daggett Julie Dart	25/7/00	IP	Met with PPP 24/7 to establish if any local team initiatives are in place. Currently, they ring up the top 10 worse offending offices weekly - this takes four hours of a PO's time. They have previously put out information in Counter News, and this may be worth doing again to cover interim between now and the Mark Burley solution due in November (see 1G). TP Internal Solution Development Team looking at these areas. Due to report back 24/9
1E	<u>6th July</u> HBG is generic - Feed comments from workshop to Kevin Thompson	Joyce Daggett	25/7/00	C C	Comments given - will update group of any feedback. Kevin has asked for a copy of the Root Cause Maps.
1G	<u>6th July</u> System prompts needed to remind PMRs to enter PIVOT information on table 12 and 10g. Talk to Mark Burley to establish what has been done and when it will be implemented. Needs to be captured under ERA at point of transaction. Need to identify any other ways in which we can feed the lessons learnt into ERA	Jim Watkin Joyce Daggett	25/7/00 Project end	C	Currently, a prompt to enter DPI information is given by the system, but this is given at the beginning of the balance routine. If this warning is ignored and over ridden, then DPI cannot be entered without creating a new stock unit on which to input the data (this stock unit would then need to be deleted in the following week). There are plans to introduce an enhancement to the system which will move the prompt to a stage in the process when the last stock unit in use is due to be balanced. (This does not apply to dormant stock units which can be rolled over as at present). The system will not, however, force the user to include this information (i.e. the prompt can still be ignored) as it is possible for an office to have nil traffic and it is deemed unnecessary to force nil entries. No definite date has been set but, this enhancement is intended to follow shortly after CSR+ - maybe October/November 2000. Recommendation in final report

No.	Activity and date raised	Owner	Target date	Status	Outcome
	<u>25th July</u> The balancing problem could be solved by conformance - a systematic procedure for balancing for all offices to follow would be the ultimate solution.	Joyce Daggett Phil Turnock Jim Watkin	25/8/00	IP	Consideration of options. Recommendation for final report.
	<u>29th August</u> JW- Balancing checklist has gone out to offices. Suspense Account Errors feedback passed to Janice Rowell for comment/distribution.	Jim Watkin Joyce Daggett	20/9/00 C	IP	A balancing guide is being trialled to help achieve a standard balancing process. Jim will feedback conclusions from the trial.
	CC - Can any info from Jeff Widdowson's suspense account workshops be fed into this project? POCL cheques held in suspense account - is there a better way of doing this/can we change it? To talk to Marion Dale.	Chris Clarke Chris Clarke Joyce Daggett	7/9/00	IP IP	Chris to talk to Jeff and Marion by 24/9
2. Incorrect Icon Selected CLASS (Including 7. Delayed Cash Account)					

2C	6th July Supporting paperwork not user friendly. No emphasis on the part you need to refer to. Investigate supporting paperwork - who designs it and do they align it to the automated process? Who would incorporate in future development and would they consult users at the design stage?	Joyce Daggett	25/8/00	IP	Incorporate findings in final report
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No.	Activity and date raised	Owner	Target date	Status	Outcome
2D, 2E, 7C	6th July Abbreviations used too much in relation to Horizon. Icon use is not consistent on the system. There are no clear prompts on the system to remind you which week you are in. Feed back improvement opportunities to BSM via SIP process.	Phil Turnock	25/7/00	C	Fed to SIP. Joint initiative with TP and NBSC to sift the SIP's impact test and drive forward. Error costing analysis completed to input to joint meeting on SIP's. Phil Turnock, Ben Gildersleve and Tom Basquille to meet to decide how to progress. Ben and Joyce to meet 25/8
	29th August Phil/Ben/Tom mtg not now necessary. JD- meeting with Mark Burley (which SIP to push, concentrate on top 3)	Joyce Daggett	1/9/00	IP	SIP no. 7 and 12 will be pushed by this project via Nick Beal.
3. Incorrect Value Entered CLASS					

3E	6th July Conflicting targets in the network cause errors, ie Q of S, mystery shopper, error free account. Establish what the targets are and how they contradict/impact, and feed in to the final report.	Joyce Daggett, Kjetil Fuglestad	25/8/00	C	Discussed action with Kjetil - Incorporate findings in final report It is a fact that we have got conflicting targets, however the customer still must come first in a transaction. Even if a PM is leaving something until later, it should still reduce as part of the learning curve. See follow up action below.
	25th July Kjetil to prepare a paragraph with a grid of impacts on office performance against Business KPIs of Horizon Roll Out for final report.	Kjetil Fuglestad	25/8/00	C	Kjetil to update on progress Grid of impacts to be incorporated in final report.

No.	Activity and date raised	Owner	Target date	Status	Outcome
3F	6th July Reversals process is difficult. Feed back the comments to HFSSO's and training (Steve Grayson) knowledge pool to ensure comments are taken into account in future developments. Request Steve to report back what he has taken forward and added into HFSSO best practice guide and user comments on Roll Out being too quick and not flexible. <i>Low level activities:</i> 1) <i>Contacted Steve Grayson and awaiting reply</i> 2) <i>Comments sent to Field Support managers to cascade at team meetings</i>	Janice Rowell	25/8/00	C	Service Improvement logged to make reversal screen a different colour. Joyce looking at Service Improvements with Ben Gildersleve.

No.	Activity and date raised	Owner	Target date	Status	Outcome
4. Manual Amendments					
4A, 4B, 4C	<u>6th July</u> Lack of high level understanding of Horizon system. Don't realise this is wrong and causes problems. Once rolled over, can't go back into the system to change. Look into reinforcing communication on manual amendment problems, eg personal phone call, Counter News etc. Scope size of problem.	Joyce Daggett and a TP team leader	25/7/00	IP	Meeting set up to talk to Document Preparation team leader to examine feasibility of doing phone calls (will continue to do so unless someone tells them) - fallback would be Counter News article. May be possible to target to 20 worst offenders weekly. TP Internal Solution Development Group looking at manual amendments. Due to report back 25/9.
	<u>25th July</u> Look at options for a solution. Feed via QPA to areas with lots of manual amendments?	Joyce Daggett and Chris Clarke	10/8	IP	JD spoken to Data Prep team leader who has enough resource to do 20 phone calls per week. JD now to pursue production of a script. Postal Officer working on script - to be reviewed end of Sept.
	<u>6th July</u> Prompts on system to do a snapshot balance - re-enforce at training and in the training guide. General training problem in Northern Ireland? Scottish Trainers? Are we teaching the Scottish method in NI and therefore creating errors? Report back on email to Joyce Daggett.	Janice Rowell Janice Rowell	25/7/00 10/8/00	C C	Written report back to next steering group meeting. Northern Ireland offices not being trained any differently. Looking at stats nothing to verify that the problem is different rem process/procedure. Letter sent to Steve Grayson, recommending different training for Northern Ireland, where products differ or are NI specific/
	<u>29th August</u> Look at top error types in Northern Ireland - is there a pattern?	Chris Clarke Joyce Daggett	25/9	IP	Chris to ask PIT Team to pull off some stats for NI offices, for analysing.

No.	Activity and date raised	Owner	Target date	Status	Outcome
5. Incorrect Icon Selected PIVOT					
5A	<u>6th July</u> Complacency in offices - don't look at pictures on icons. Look at how we progress information on best practice i.e. tidy office versus untidy office and error free versus high error levels. <i>Low level activities:</i> 1. Set up meeting with Kjetil to establish how to get best use out of stats 2. Look at feasibility of office observation visits - good/bad/why/best practice.	Joyce Daggett, Kjetil Fuglestad		C C	Discussed with Kjetil and agreed a way forward. See follow up action below. Stats show that high error offices in manual environment only explains 20% of the post Horizon high errors












	<p>25th July</p> <p>Provide some analysis around balancing process of good and bad offices, including some that were low error in the manual environment and are now high in the automated, and some that were high error manually and are now low. Also to include some Northern Ireland offices. A range of size and mix of business etc. to be taken into account. An observation sheet will then be put together. We may need to test it out before we go live with it. We need Steering Group input on the best way to do this study and who could support us doing it, i.e. HORN support RNMs, HFSO etc.</p> <p>Kjetil Fuglestad to update Joyce Daggett.</p>	Kjetil Fuglestad, Joyce Daggett	10/8/000	IP	<p>Trained data gatherers (ie branch office staff that can be loaned for specific projects). Need to understand size of project.</p> <p>Need updates from Kjetil to determine what needs to go into the final report.</p>
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No.	Activity and date raised	Owner	Target date	Status	Outcome
5C	<u>6th July</u> Parcel paperwork confusing. Once sticker removed one word differentiates forms, so easy to enter under wrong icon. Raise issue on parcel forms with Mark Burley. Will this be covered by CCN631?	Jim Watkin	25/7/00	C	The problem with identically coloured DPI schedules is currently being assessed, but current thoughts are that the whole parcel acceptance procedure in the Network needs revamping. In the light of this, it is unlikely that the forms will be re-issued in alternate colours as previously. Likely to be completely new forms
	<u>25th July</u> Joyce to feed back all workshop comments to suppliers and Parcel Account Managers.	Joyce Daggett	25/8/00	NS	
6. Correct Icon Not Available					
6D	<u>6th July</u> Don't know who to contact if they don't have icon. Communication to offices on what to do when icon not available. Flag up to Nicola Wood.	Phil Turnock	25/7/00	C	E-mail sent regarding having a Counter News article on this problem.
8. Incorrect Balancing Procedures					
8A, 8B, 8C	<u>6th July</u> Offices not doing further balance after out of hours transactions, eg lottery, APT, bill payments, BT. Effect of this is not communicated clearly enough for people to understand. Correct procedure to follow for the use of out of hours stock is not clear enough. Feed comments into Steve Gibbs for the work he is doing on this issue.	Joyce Daggett	25/7/00	IP	Fed comments to Steve Gibbs, nothing back as yet. Have fed into some work Graham Simmons is doing on out of hours for the HFSO's. Passed him information from teams and input to the brief. Draft OOH procedure received from Steve Gibb for comment on 9/8. To be re-done to show 'how' it should be done. Awaiting outcome of report after comments fed back. Out of hours process also covered in the two documents produced for Counter News.

No.	Activity and date raised	Owner	Target date	Status	Outcome
Measurement Linked Activities					
M1	<u>25th July</u> Understand the increase in the manual error baseline	Joyce Daggett & Chris Clarke	14/8/00	C	A number of factors are increasing the manual baseline, including HEMEL, PDP/PIP. The manual baseline appears to have changed and may never get back to 0.63. **?
	<u>29th August</u> Consider recommending splitting Automated Payments off from Personal Banking	Chris Clarke Joyce Daggett		C	
M2	<u>25th July</u> To document the measurement process.	Kjetil Fuglestad		C	Kjetil to update - complete
M3	<u>25th July</u> Document an impact calendar, recording ALL activities - for use in measurement	Joyce Daggett & Chris Clarke	14/8/00	C	Impact calendar produced. JD to distribute.
General Communication Linked Activities					
C1	<u>25th July</u> Produce a communication on the top errors and how to avoid them	Joyce Daggett & Chris Clarke	20/8/00	IP	First draft being circulated for comment and amendment 9/8. Draft now complete and ready to send to Communication Team for deployment.
C2	<u>25th July</u> Speak to Mark Kelly regarding the possibility of any wider communication	Joyce Daggett	28/8/00	C	Mark advised use of current communication vehicles. Counter News suggested. All communication must be passed by BSM. What about a communication in Counter News informing of the whole project?

Appendix E - Transaction Processing Error Root Cause Impact Calendar

- Project ends 31/8
- Bearing in mind TP backlog it will probably be 12 weeks before we see any results i.e. 30th November.
- What other influences are there between 30/6 and 30/11 which will/could impact results
- Errors cleared by QPA category which we targeted in May 00.

Error Type	CSR+	Mark Burley	OPTIP Stage 1	OPTIP Stage 2	Root Cause Project
HP201 Incorrect/nil entry PIVOT					
HC201 Incorrect icon selected CLASS					
HC 202 Incorrect nil/ value entered CLASS					
HP206 Manual amendment					
HP203 Incorrect icon selected PIVOT					
HP209/HC217 Correct icon not available					
HC 210 Delayed cash accounts	(N.B. this category needs to be monitored through roll out - could lead us into trouble)				
HC76 Incorrect date on BCV					
HN202 Incorrect/nil entry entered PIVOT negative sales					
HC206 Incorrect balancing procedures automated payments				 possible	
HC707 no signature (not a Horizon error)					