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# Memorandum

Horizon Programme

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| Cc.: | | Date: | 7 January 1999 |
| Subject: | HEB Study | | |

Find attached a copy of the HEB Consultants Summary findings from the 'Right First Time' initiative. The paper is still very relevant in the areas of non-conformance, before & after procedures and training. I would urge you please to refer to it when considering next steps in these key areas.

Thanks

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Enc.

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# APPENDIX A

## Summary of Branch and Sub-Office Studies

### Conceptual Framework

**Competence** - The most basic form of error results from lack of skill or knowledge needed to perform every aspect of a given task. It is surprisingly common, even among individuals who are generally well trained and experienced. Specific lack of competence can arise from poorly structured and/or delivered training. It might also exist because training was never provided, following an assumption that someone would 'pick up' the necessary know-how, or that it just needed application of 'common-sense.' Once a person has been doing a job for a while, they can easily become locked into an 'incompetence trap' where they feel unable to say that they are unsure how to perform every part of the task, or need training or other support.

**Mistakes and Slips** - Beyond lack of competence, it is useful to draw a distinction between mistakes and slips. Misunderstandings between people, wrong choices, mis-estimates, mis-timing and failing to recognise which rule to apply are all mistakes and are largely under conscious control. By contrast, mis-reading a number, forgetting to do something and failing to spot a detail are all described as slips. They are largely unconscious and just trying to be more careful does little to avoid them. Slips can be difficult to tackle and are often concerned with skilled behaviour, deeply ingrained habits or long-established tasks.

**Multi-Factor** - As part of the process of establishing competence on a task, we naturally learn to avoid or promptly trap errors. Most slips and many mistakes only result when the combined effects of two or more risk factors overcome these natural defences. However when asked why an error occurred, people often attribute it to the most recent or obvious factor. Perhaps 'the straw that broke the camel's back.' This naïve analysis undermines risk reduction.

**Structure and Stressor** - 'Structural' risk factors are those such as badly designed procedures, equipment or documents that are relatively tangible, permanent characteristics of an activity. 'Stressors' are often more transient or less tangible, for example an interruption, a deadline, or conflicting priorities. They tend to amplify effects of structural factors or bring them into play.

**Risk Reduction** - The likelihood that a given error will occur can be reduced by addressing as many risk factors as possible, although it might not be necessary to tackle them all. Fortunately in many practical situations, dealing with several troublesome factors can reduce the risk of numerous commonplace errors. For example, better procedures and ergonomics, with less noise and interruptions might help to avoid many differing errors. Many 'Good Practices' known to address commonplace risk factors can be found 'off the shelf' or by studying those who manage to avoid error.

POL00039730



# Terms of Reference

## Sub Office Study

At the outset, the brief was to look at operation of Sub Post Offices (SPOs) with a view to understanding and reducing human error.' Once the exercise was under way it became clear that many of the problems were in preparation of the 'Cash Account' rather than in 'counter service' activities. It was therefore decided to place the major emphasis on this aspect of error in SPOs.

Two SPOs were studied, (Cheedle Hulme and Romiley). The former was experiencing a high incidence of error (>50 errors in six months) and the latter was virtually error-free. Detailed differences between the two offices were studied to gain insight into why errors might occur.

## Branch Office Study

The decision to extend the study to consider Branch Offices (BOs) was driven by:

- The significant cost of error from some of these larger offices ... and
- The greater influence over risk reduction that could be exercised within Post Offices owned by POCL and operated by its own employees.

From the outset it was clear that a comparative study would be appropriate because some BOs were virtually error-free, whilst some others experienced high incidence of error. The challenge was to understand how and why some offices managed to avoid error where others did not, rather than develop an understanding of the problem from scratch. In other words, 'how to make the rest like the best.'

Two 'high error' and two 'low error' offices were chosen for study, based on records, kept at Chesterfield. However the classifications used made it difficult to be sure that offices selected as 'high error' were fully representative. These difficulties gave rise to an exercise to improve analysis of errors at Chesterfield.

# Summary of Findings and Conclusions

Any discussion of error in POCL ought to be prefaced by a reminder of the relatively low incidence of error already achieved, when compared with analogous activities elsewhere. This makes the 'fine-tuning' achieved by 'low error' offices of particular importance.

Both SPOs completed the weekly 'Cash Account' form, based on manual counts of stock and non-cash items. The BOs all used the ECCO system. Whilst there are errors peculiar to the manual or automated accounting procedures, many of the fundamental problems are shared by both.

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## Shared Problems

**Back Office Process** - Although outputs of the 'back office process' are defined, (in the Counter Operations Manual and elsewhere) they are not described as a single coherent procedure, nor is there detailed guidance on how to perform various vital tasks, such as checking one document against another. Sub offices and BOs that have more highly structured 'back office' procedures enjoy lower incidence of error. They rely less on remembered information and remembering to do things. They make greater use of 'job-aids' such as checklists, tick-lists, summary forms and 'ordered physical location.'

**Training** - Lack of uniformity of procedures also undermine training, leaving it largely to the discretion of the trainer and making objective assessment of competence difficult to achieve.

**Time Management** - Not only does lack of structure make tasks themselves more vulnerable but it also tends to expose the weaknesses by failing to optimise time-management, thereby putting those tasks under avoidable pressure. Considerable differences in the timing and order in which activities were carried out were identified by a 'snapshot survey' of BOs.

**Interruptions** - Unhelpful influences (such as ringing telephones and casual comments from others) likely to disrupt vulnerable, memory dependant tasks, (such as counting) tend to be more actively managed in 'low error offices' thereby further reducing pressures.

**Overcrowding** - Many offices had insufficient workspace available to carry out visually demanding tasks, (such as checking) without a cluttered visual environment. In many cases this was because space was badly used. Better storage arrangements and disposal of surplus materials were evidently needed.

**Inappropriate Parsimony** - Faded printer ribbons producing almost unreadable printouts, unstackable cardboard boxes for storage, scraps of easily mislaid paper for recording important information and so on ....

**Information Access** - Difficulties with looking-up and integrating the latest instructions about stock and procedures from various sources are especially likely to lead to misunderstanding or guessing when the information is needed in a hurry.

## Sub Offices

**Cash Account Form** - With increasing tendency to introduce and withdraw or modify Cash Account items completing an error-free weekly 'Cash Account' form (P1016D) poses an onerous challenge. Its numbering, layout, and descriptive content create opportunities for error, awaiting momentary distraction or other transient upset to slip into effect. Only the most rigorously methodical approach to the task (of the kind used at Romiley) can guard against those everyday influences.

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Cross-Checks - Reliance on cross-checks in a manual accounting system have more value where two independent calculational routes are used, (e.g. totalling rows and columns) rather than re-checking a single piece of work.

## Branch Offices

ECCO Training - Although training for the ECCO back office processor is available, it appears not to be mandatory for those who use it.. Although some individuals seem fully conversant with the system and all of its facilities, others are certainly not.

Part-Time Staff - Although part-timers form a significant part of the workforce, little account seems to be taken of their special needs, especially with regard to ensuring that they know about changed procedures etc. This leads to misunderstandings or oversights, especially in larger offices.

## Recommendations

Over the course of the two studies it has become clear that although many of the risk factors leading to human error have been tackled successfully somewhere within the Post Office network, the organisation as a whole has not benefited as fully as it might. The considerable effort expended on improving counter service needs to be matched in the 'back office' by standardisation of the process and minimisation of associated risk factors, all taking full account of 'good practice.' Competence of those performing every aspect of 'back office' work must be assured.

Specifically it has been recommended that:

- All steps in the 'back office process' be identified and recorded (flowcharts etc.)
- Each step be optimised by reference to known best practice within the network
- The optimum sequence of operations be identified (with allowable flexibility)
- 'Good Practice' be identified for each known risk factor

..... and then

- Develop an optimised 'back office process'
- Training and assessment procedures be designed to assure competence

..... and then

- An audit process be prepared to assess where corrective action is required
- An implementation package be prepared to assist those unable to comply with audit requirements

Different versions of the 'back office process' will need to be developed to accommodate differing circumstances, (ECCO/non-ECCO, large/small, together with various mixes of business) however, the core structure could be common.

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The 'back office process' should define:

- What to do (currently described in Counter Operations Manual)
- How to do it (method, sequence, equipment, job-aids, documentation)
- Who should do it (including how responsibilities should be shared)
- Where or under what conditions it should be done (e.g. quiet room)
- When it should be done (start and finish by not later than ...don't start before ..)
- Any activities that must precede it
- Any activities that must follow it
- Prohibited practices
- What to avoid and/or be aware of

Among the many 'good practices' that could be incorporated into the optimised back office process include:

- Layout of work space and basic ergonomics (including lighting)
- Housekeeping (to get rid of junk and optimise use of space)
- Protection of vulnerable tasks from interruption and distraction
- Optimisation of checking techniques (structure, procedure, job-aids etc)
- Avoiding over-reliance on remembering (easy references, visual tracking etc.)
- Reduce reliance on verbal message passing
- Special consideration of needs of part-time employees

The audit process might be similar in structure to that used for ISO 9000, although the content would be quite different. Content could be based on HEB's general human error audit checklist, enhanced to include POCL-specific issues.

## Implementation

Although any of the 'good practices' could be implemented in isolation and locally with some benefit, that would not address the cultural shift needed within POCL if significant impact is to be made on the major cost burden of processing errors from over 19000 Post Offices at Chesterfield.

It is most earnestly recommended that a national approach optimising the 'back office process' be undertaken and implemented across the network. The alternative has already been tried and has not succeeded. There has been no shortage of sound advice and good ideas in Counter News and regional publications. Trainers, help desks and experienced folk have all offered advice to anyone who would listen and still all but the very best offices make several back office errors each year.

In the terms of reference described above, the challenge was characterised as 'making the best like the rest' and the study has made it clear that there are definable differences between those who make errors and those who do not. More work needs to be done to define those differences comprehensively and precisely and then build them into a process but it plainly can be done.

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In an increasingly volatile business environment POCL will need to disseminate many changes in working practices to its huge network in the years to come and now is as good a time as any to review the most cost-effective means by which this might be achieved. To ignore recent and rapid advances in information technology and distanced learning techniques would be to miss an opportunity.

Existing availability of the 'Counter Operations Manual' and 'Counter News' on CD-ROM argue for extension of this technology to include procedural, training and self-audit materials to support implementation of the new 'back office process.'

An audit procedure guided by improving statistical work at Chesterfield could target those most likely to benefit from help. A business case can be made for providing a remedial support package to those generating the biggest cost burden and most in need of help.

Development and piloting of the various components of the proposed changes could usefully be undertaken with regional participation, to key into the dispersed pool of differing expertise. This would also help to defuse concerns about forthcoming change and lend 'real world' credibility to the initiative.

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