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Document Title:	Transaction Time Benchmarking Process
Document Reference:	SVM/SDM/PRO/0017
Release:	Release Independent
Abstract:	This document describes the process that will be used to conduct the HNG-X Counter Performance assessment as described in Schedule B6.1. It also describes how the basis for assessment has changed from video benchmark analysis to system derived transaction time data.

Further, the basis for the ongoing Transaction Time Benchmarking Service is described. |
| **Document Status:** | FOR APPROVAL

This document contains sections that have been identified to POL as comprising evidence to support the assessment of named Acceptance Criteria by Document Review. These sections must not be changed without authority from the FS Acceptance Manager |
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External Distribution:	(Specify those individuals outside of the Royal Mail Group Account who required approved version only. For RMGA Document to distribute following approval)
Security Risk Assessment Confirmed	NO

Approval Authorities:

Name	Role	Signature	Date
Sarah Bull	Manager – Branch Services and Release Management	See Dimensions for record	
		See Dimensions for record	

See HNG-X Reviewers/Approvers Matrix (PGM/DCM/ION/0001) for guidance on who should approve.

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0 Document Control

0.1 Table of Contents

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0.2   Document History

Version No.	Date	Summary of Changes and Reason for Issue	Associated Change - CP/PEAK/PPRR Reference
0.1	29 May 2009	First draft	
0.2	01 Jun 2009	Revisions following initial internal review	
0.3	05 Jun 2009	Revisions following internal review	
0.4	26 Jun 2009	Revised to address internal and initial POL comments	
1.0	17 Jul 2009	Version For Approval	

0.3   Review Details

*See HNG-X Reviewers/Approvers Matrix (PGM/DCM/ION/0001) for guidance on completing the lists below. You may include additional reviewers if necessary, but you should generally **not exclude** any of the mandatory reviewers shown in the matrix for the document type you are authoring.*

Review Comments by :	17/07/09
Review Comments to :	David.cooke(GRO]

Mandatory Review	
Role	Name
FS Service Manager	Sarah Bull
HNG-X and Non Functional Test Manager	Lee Farman
POL Design Authority	Ian Trundell

Optional Review	
Role	Name
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POL	Noel Beaton
FS Design/ Development Manager	Adam Cousins
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FS Systems Qualities Architect	Dave Chapman
FS SV&I Test Manager	Sheila Bamber
CS Migration Governance Manager	Graham Welsh

Issued for Information – Please restrict this distribution list to a minimum	
Position/Role	Name
CS Service Definition Manager	Adam Bowe

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(*) = Reviewers that returned comments

0.4   Associated Documents (Internal & External)

Reference	Version	Date	Title	Source
PGM/DCM/TEM/0001 *(DO NOT REMOVE)*	5.0	03 June 2009	RMGA HNG-X Generic Document Template	Dimensions
SVM/SDM/SD/0016			Management Information Service: Service Description	Dimensions
SVM/SDM/REP/0007			Validation of HNG-X System Derived Transaction Component Times	Dimensions
SVM/SDM/REP/0009			HNG-X Representative Basket mix	Dimensions
SVM/SDM/TP/0002			HNG-X Representative Transaction Scripts	Dimensions
SVM/SDM/REP/0008			HNG-X Counter Performance Assessment Results	Dimensions

Unless a specific version is referred to above, reference should be made to the current approved versions of the documents.

0.5   Acceptance by Document Review

The sections in this document that have been identified to POL as comprising evidence to support Acceptance by Document review (DR) are listed below for the relevant Requirements:

POL NFR DR Acceptance Ref	Internal FS POL NFR Reference	Document Section Number	Document Section Heading
SVC-842	SVC-795	4.1.1	Benchmark Period
SVC-799	SVC-799	4.1.2.1	Back Office / Admin transactions
SVC-805	SVC-805	Whole Document	
SVC-806	SVC-806	Whole Document	
SVC-855	SVC-808	3	'Stream 1' activities

0.6   Abbreviations

Abbreviation	Definition

0.7 Glossary

Term	Definition
Benchmark transaction set	
Basket mix	A set of Basket / Customer Sessions containing one or more Transaction Types ranked by volume of occurrence.
Benchmark Period	The period of time from which transaction data will be taken. The dates are specified in section 4.1.1
System components	Discrete periods of counter processing activity that will be measured to support the counter performance assessment.
Transaction Type	A generalised instance of an actual transaction - e.g. 'AP-InPay' representing all utility bill payment transactions

0.8 Changes Expected

Changes
None

0.9 Accuracy

Fujitsu Services endeavours to ensure that the information contained in this document is correct but, whilst every effort is made to ensure the accuracy of such information, it accepts no liability for any loss (however caused) sustained as a result of any error or omission in the same.

0.10 Security Risk Assessment

Security risks have been assessed and it is considered that there are no security risks relating specifically to this document.

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1 Introduction

This document describes the process that will be used by Fujitsu to conduct the HNG-X Counter Performance assessment as described in Schedule B6.1. This activity (also known as Transaction Time Benchmarking) is concerned with a comparison of applicable sets of Horizon and HNG-X representative transaction types and comprises the formal basis for the acceptance of the HNG-X counter performance.

This document describes the key stages of this assessment process, the analysis method that is to be used, the sources and usage of the underlying transaction component time data and the basis for any adjustments to these component timings.

A key change from the previous Horizon Transaction Benchmarking process is the introduction of system generated transaction component times to replace Video Benchmarking (subject to confirmation)[1]. Validating that this approach provides accurate and comparable timings is a necessary stage in ensuring both POL and FS can have confidence in this approach going forward, and this aspect is covered in this document.

As noted above, the overall objective of this process is to satisfy the contractual obligations and acceptance criteria contained in Appendix A & B. Separate from these specific activities is the ongoing Transaction Time Benchmarking Service which is described in SVM/SDM/SD/0016 - Management Information Service – Service Description. This service will utilise some of the deliverables from the counter performance assessment and this aspect is also described in this document.

This document and the associated assessment activities are intended to be completed and assessed as part of Acceptance Gateway 3 (Readiness for Pilot), and so will act as one of the entry criteria into Pilot.

1.1 Scope

This document is organised as follows:-

Section 1 – Introduction - provides an overview of the scope of the process and the contractual background.

Section 2 – Counter Performance Assessment Process – describes the tasks within the two main streams of activity, namely

- The validation of the system derived transaction component times

- The analysis, calculation and comparison of the HNG-X Counter Performance

Section 3 – Representative Basket Mix – describes the approach to establishing the representative workload profile

Section 4 – Assessing the HNG-X Counter Performance – describes the analysis and calculations that underpin the comparison calculations.

It should be noted that the calculations and performance comparisons that underpin this process are based on averaged representative transaction types, and that various adjustments will be applied to take account of agreed differences between Horizon and HNG-X transactions, typically revised user interactions or UI functionality. Accordingly no direct inference can be drawn from these averaged figures to the typical transaction times that will be experienced by Branches.

Other performance assessment activities, such as the outcomes of the testing carried out via TST/SOT/HTP/0008 HNG-X Counter Performance High Level Test Plan, may provide information in this area.
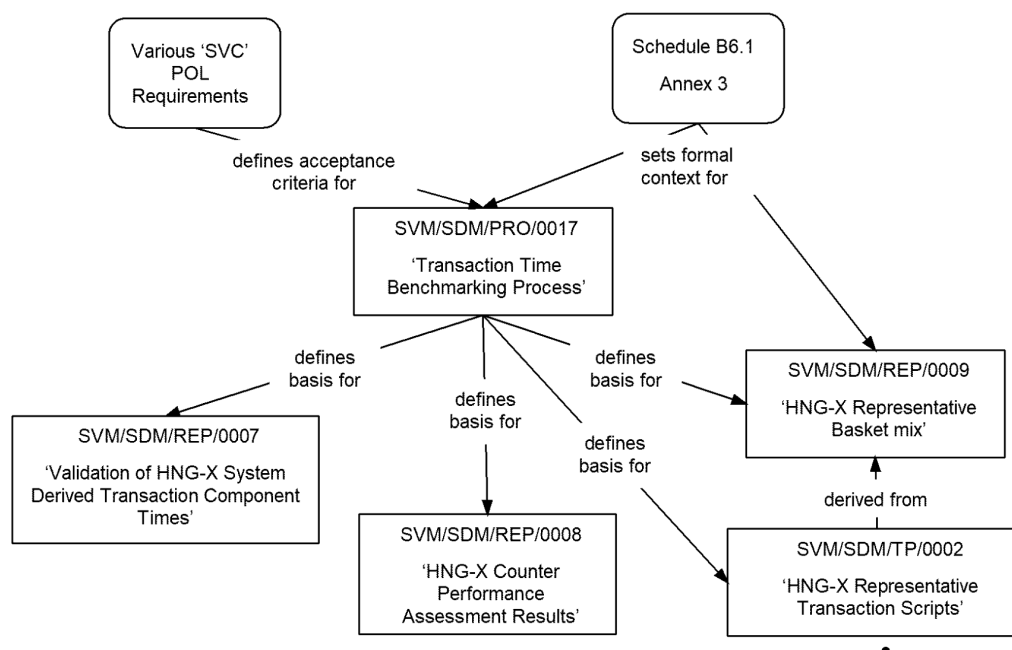
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[1] The introduction of system generated transaction component times is subject to the successful completion of the Steam 1 activities described in section 3.

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1.2 Document Hierarchy

This document forms part of a set of documents that will collectively provide the descriptions and results associated with HNG-X Counter Performance assessment. They are as follows:-

- SVM/SDM/PRO/0017 – this document

- SVM/SDM/REP/0007 – Validation of HNG-X System Derived Transaction Component Times
  - o This document describes how the system generated transaction component times have been validated as accurate against the Winrunner tool.

- SVM/SDM/REP/0009 – HNG-X Representative Basket mix.
  - o This document defines the representative workload profile from data gathered during the Benchmark Period. It describes the set of representative baskets (customer sessions) ranked by frequency of occurrence.

- SVM/SDM/TP/0002 – HNG-X Representative Transaction Scripts
  - o This document describes the user and system interaction sequences that make up each of the representative transaction types within the Representative Basket mix. It also contains details of the Winrunner scripts that will be used to run these transactions.

- SVM/SDM/REP/0008 – HNG-X Counter Performance Assessment Results
  - o This document describes the calculations and data that have been used to generate the Horizon / HNG-X counter performance assessment. This includes the Horizon and HNG-X system component times and any adjustments that arise from changed UI features or transaction sequences. It includes results of the Basket mix aggregation and the overall performance comparison.

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1.3 HNG-X Contractual Requirements

As indicated above the formal basis for the HNG-X Counter Performance Assessment is Schedule B6.1, Annex 3 para 4 – reproduced in Appendix A, together with various SVC requirements – reproduced in Appendix B.

The criteria that this document specifically addresses are referenced in section 0.5 – Acceptance by Document Review.

1.4 Assessment Principles

From the Schedule specification and the POL requirements a number of key assessment principles and definitions are either explicitly specified or can be derived. These are shown below: -

#	Assessment principle / definition	Derived from	Comment
1.	The performance characteristics of the HNG-X Counter applications must be acceptable to POL, and that this will be demonstrated by a jointly agreed process	Schedule B3.1 / Annex 3	POL will review and approve this document and the assessment results
2.	The basis for assessing the HNG-X counter performance is that it delivers equivalent or better performance characteristics than Horizon, based on principles described in this document	Schedule B3.1 / Annex 3	The document SVM/SDM/REP/0008 – HNG-X Counter Performance Assessment Results will demonstrate this
3.	The assessment will be based on an agreed set of representative Transaction Types and their associated Customer Sessions.	Schedule B3.1 / Annex 3. SVC-798.	The document SVM/SDM/REP/0009 – HNG-X Representative Basket mix will describe how actual customer session data (transactions and settlement) are translated into the various combinations of Transaction Types. These are then ranked by volume to enable the most frequently occurring to be used as the basis for the performance assessment.
4.	The assessment will be based on an agreed measurement period – The Benchmark Period	Schedule B3.1 / Annex 3. SVC-842.	Section 4.1.1 defines this period

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5.	The basis of the assessment is on the system components of the counter application	Schedule B3.1 / Annex 3	As with standard benchmarking activities, user interactions are excluded. In addition on-line component times that are subject to separate SLTs will be recorded but are excluded from the comparison analysis, since achievement targets for these have been agreed and are included in the relevant SLA.
6.	The composition of each Transaction Type may be adjusted to take account of any changed processes or changed UI characteristics	Schedule B3.1 / Annex 3	HNG-X has enabled POL to introduce various operational enhancements to the user dialogues of some transactions. In addition the new UI introduces some new display and interaction characteristics that will also change the user actions for some transactions from their Horizon equivalents.

The document SVM/SDM/REP/0008 – HNG-X Counter Performance Assessment Results will specify which transactions have been adjusted such that a fair comparison of Horizon and HNG-X timings can be made. |
7.	POL may request the introduction of additional Transaction Types if anomalous performance characteristics are observed.	Schedule B3.1 / Annex 3	The Transaction Time Benchmarking Service and/or the Capacity Management Service will assess any such anomalies and will agree with POL what effect or remediation is required.
8.	Design Targets may be substituted for actual measurements	Schedule B3.1 / Annex 3	The document SVM/SDM/REP/0008 – HNG-X Counter Performance Assessment Results will specify where design targets or derived values have been used in place of actual measurements
9.	The basis for the assessment will be based on the average of the measurements for the sets of representative Transaction Types.	Schedule B3.1 / Annex 3	Section 4.4 specifies the basis for calculating these average figures for Horizon and HNG-X.

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10.	Video benchmarking shall be replaced by system generated transaction component times (Subject to confirmation)	SVC-809 SVC-810	Section 3 and the document SVM/SDM/REP/0007 – Validation of HNG-X System Derived Transaction Component Times describe how the change from video benchmarking has been validated.
11.	Video Benchmarking shall be used to derive transaction component times for HNG-X and Horizon transactions (Subject to confirmation)	SVC-807 SVC-855	Existing Horizon video benchmark data from S92 will be used a part of the counter performance assessment. For the HNG-X transactions it is proposed that the system generated transaction times are used as the basis for deriving the component time data as an alternative to Video Benchmarking. This approach is described in section 3 and the validation of the system generated data is described in SVM/SDM/REP/0007 – Validation of HNG-X System Derived Transaction Component Times

2 Counter Performance Assessment Process

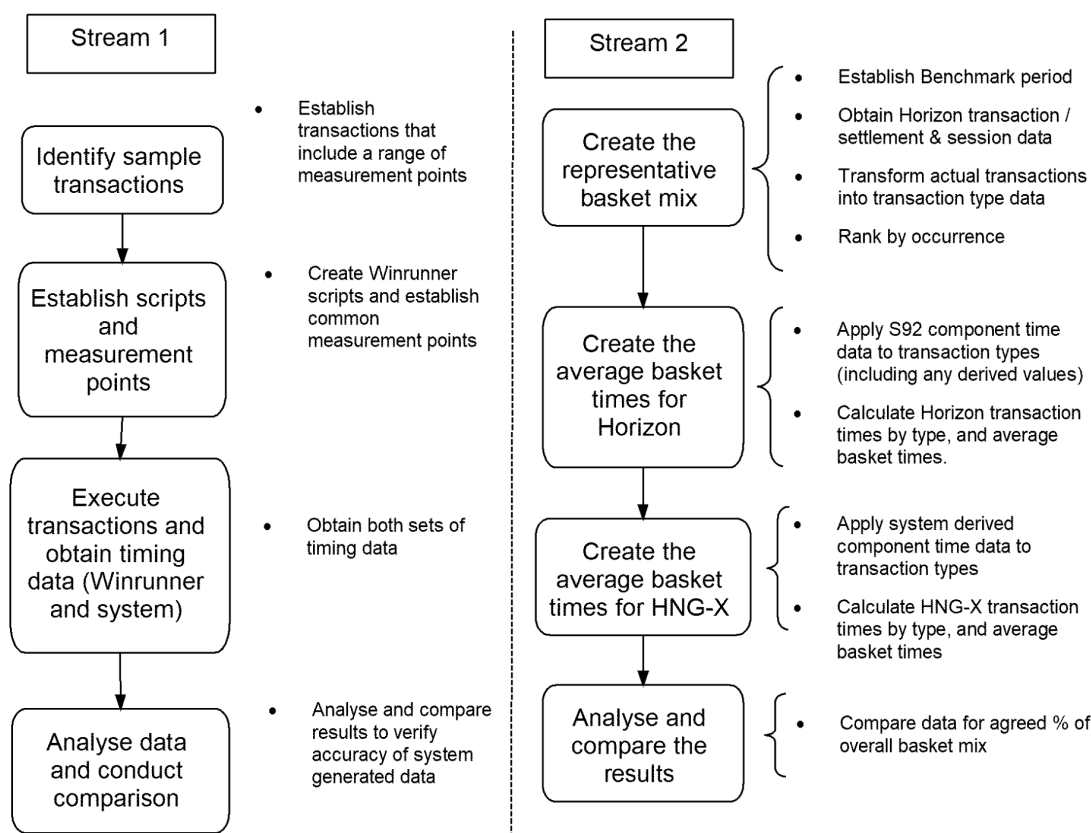The counter performance assessment process comprises two main streams of activities: -

- Stream 1 - Verify the system generated transaction component times

- Stream 2 – Create and compare the transaction times of the Horizon & HNG-X representative basket mix.

The objective of Stream 1 is to establish that the system generated transaction component times are accurate. This will be achieved by using a proven measurement technique – Winrunner – to obtain timing data for defined transaction sequences and then validating these values against the equivalent system generated component time data.

The objective of Stream 2 is to establish the representative basket mix and the associated transaction types, obtain the component time data, and generate the comparison data.

2.1 Process Overview

The main stages of each of the two processes are shown below: -

Stream 1

Identify sample transactions
- Establish transactions that include a range of measurement points

Establish scripts and measurement points
- Create Winrunner scripts and establish common measurement points

Execute transactions and obtain timing data (Winrunner and system)
- Obtain both sets of timing data

Analyse data and conduct comparison
- Analyse and compare results to verify accuracy of system generated data

Stream 2

- Establish Benchmark period
- Obtain Horizon transaction / settlement & session data
- Transform actual transactions into transaction type data
- Rank by occurrence

Create the representative basket mix

Create the average basket times for Horizon
- Apply S92 component time data to transaction types (including any derived values)
- Calculate Horizon transaction times by type, and average basket times.

Create the average basket times for HNG-X
- Apply system derived component time data to transaction types
- Calculate HNG-X transaction times by type, and average basket times

Analyse and compare the results
- Compare data for agreed % of overall basket mix

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3 'Stream 1' activities

The POL Requirements SVC-808 and SVC-809 state that Video Benchmarking should be applied to both Horizon and HNG-X transactions (for the purposes of comparison) and that subsequently transaction component times should be derived directly from the counter application. SVC-810 states that this transition requires that the results must be calibrated (to verify that the system derived times are comparable to previously acquired values).

Fujitsu have assumed that the requirement to employ video benchmarking for HNG-X was intended solely to acquire transaction time data using an existing and established technique.

Fujitsu believe that a more flexible approach can be employed using Winrunner, a standard transaction scripting tool used by Joint Test Team, rather than Video Benchmarking. This will enable the accurate execution of multiple scripts to be run and modified as necessary for a range of transactions. Winrunner scripts also provide transaction component times.

Accordingly Stream 1 will define a range of HNG-X transactions that will be executed by Winrunner with timing data being obtained from both Winruner and the counter application. Demonstrating that these times are comparable will allow system generated timings to be introduced and used in the main counter performance assessment, and remove the need to conduct any HNG-X Video Benchmarks.

3.1 Define Sample Transactions

Stream 1 will define a sample set of transactions that include a range of measurement points including: -

- A range of different user input and output UI constructs
- Transaction steps involving the operation of all counter peripherals
- Initiation, wait and respond to on-line steps
- Report production
- The use of local (e.g. cash) and on-line settlement

The number of transactions is expected to be relatively small (<20) since this activity is only concerned with verifying that a representative selection of measurement points has been included.

The specific transactions and their measurement points will be described in SVM/SDM/REP/0007 – Validation of HNG-X System Derived Transaction Component Times.

3.2 Obtain Timing Data

The set of transactions identified above will be run a number of times and the component times from both sets of measurements averaged.

The types of component time data that will be obtained includes: -

- Counter processing time
- User waiting time
- Peripheral time
- 'On-line' communication time

as well as the total duration of the transaction.

It will be important to verify that the measurement points for both sets of timings are identical, such that accurate comparisons can be made. The granularity of all of the measurement points may be different

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between the two sets of timings but there will always be a set of common start and stop points from which the data will be drawn.

3.3 Verification

The use of system generated component time data will be proven once the average of both sets of common measurement point data are identical to within agreed tolerances.

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4 'Stream 2' activities

Stream 2 is concerned with delivering the counter performance assessment described in Schedule B6.1 and in meeting the various POL requirements contained in Annex A. The principal activities of this stream are to establish the Basket Mix, obtain the HNG-X and Horizon timing data and to establish the applicable transaction steps, taking account of any adjustments arising as a consequence of introducing HNG-X.

4.1 Create Representative Basket Mix

In order that the 'agreed sets of representative transactions' (Schedule B3.1 / Annex 3) can be established it is necessary to analyse data from the 'Benchmark Period' in order to ascertain the most frequently occurring transactions. In order that this reflects the actual business throughput of a Branch the approach to determining this representative workload will be on the basis of Baskets or Customer Sessions. These represent the actual units of work undertaken by Branches rather then just establishing a ranking of discrete transactions.

The representative basket mix will be established by taking the transaction data associated with all customer sessions for all Branches during the Benchmark period. The source of this data is intended to be the POL-MI data for this period.

This data will be analysed to establish the number of customer baskets containing one or more 'logical' transaction types, these being determined from the actual discrete transactions, and in particular the product ID of the item being transacted.

For example three separate baskets each containing a single bill payment involving a different utility company will count as three instances of a basket with a single AP In-Pay transaction.

The results of this analysis will be ranked by occurrence such that a workload profile or Basket Mix analysis is established identifying the most commonly occurring baskets through to the most infrequent. An analysis of this type conducted on data approx two years ago showed that whilst there were approx 10,000 different basket / transaction combinations, the top 20 entries accounted for approx 80% of all baskets. It is expected that a similar workload profile will result from this updated analysis and if this is the case it is proposed that the top 20 transactions are used as the set for which transaction time analysis is done.

The results of this analysis will be recorded in SVM/SDM/REP/0009 – HNG-X Representative Basket mix.

4.1.1 Benchmark Period

The Benchmark Period is the period from which the Horizon transaction data will be drawn to establish the average workload profile. This period should be representative of normal Branch trading, and should therefore exclude seasonal periods but should include normal cyclical activities such as month end trading.

It is proposed that the Benchmark Period will be the two weeks straddling the end of March / start of April – 23/03/09 to 05/04/09.

This period has been verified as representative by Dave Chapman – architect for HNG-X System Qualities & Capacity Management.

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4.1.2 Transaction Types

Each actual transaction will be counted as an instance of the logical transaction type that it relates to. This essentially ensures that discrete transactions that are realised through the same set of user / system activities (i.e. realised through the same Use Case) are counted as the same. The set of Transaction Types will be:-

- Retail – all simple 'EPOSS' style transactions

- AP In-Pay – all basic 'AP' style transactions

- Bureau – all sell and buy Bureau de change transactions

- Banking – all Banking deposit and withdrawal transactions

- ETU – all types of E-Top up transactions

- Back Office / Admin transactions – see section 4.1.2.1

- Other – all other transactions (excluding those in section 4.1.2.2). Additional Transaction Types will be introduced as necessary if the volume of transactions / baskets cause them to appear in the 'top 20'.

In addition a settlement transaction will be associated with each basket. This will either be a Debit Card transaction or a local settlement item (i.e. Cash / Cheque etc.).

4.1.1.1 Back Office / Admin transactions

Where possible the Transaction Type analysis will also aim to identify Back Office / Admin transactions although these may not always be derivable from the overall transaction data.

The volume of such transactions will be much smaller than the customer facing transactions that form the vast majority of the Basket Mix analysis, and so their overall effect on an average basket is expected to be quite limited. In addition although the actual transaction content will be different, most Back Office / Admin transactions will involve many common transaction components (data input response, peripheral operation, screen updates etc) that will have been included in the main customer facing analysis.

The results and contribution of any Back Office / Admin transactions will be included in SVM/SDM/REP/0008 – HNG-X Counter Performance Assessment Results.

4.1.1.2 Candidates for Exclusion

Horizon Mails transactions may be excluded from this analysis as they are wholly replaced by HNG-X Postal Services which has different user process and system interactions. Only those transaction steps that are comparable in terms of user interactions will be included in the comparative timing analysis. See also section 5.

4.2 Create HNG-X Timings

Specific transactions will be identified that represent each of the logical transaction types in the basket mix analysis. If the most frequently occurring basket is a Banking Cash Withdrawal, then a specific instance of this transaction will be scripted (using the most frequently occurring product from the product frequency analysis) and used as the basis for gathering transaction component time data.

Each transaction (representing a transaction type) will be decomposed down into its constituent component parts these representing the measurement points for which timing data will be obtained.

These measurement points will separate out user activity (i.e. awaiting user input, entering data), local counter / peripheral processing, and external / on-line activities.

Transaction scripts will be created for each transaction and recorded in SVM/SDM/SSD/0003 – HNG-X Representative Transaction Scripts. They will be executed on a suitable test environment.

The applicable component times (see section 4.2.2) taken from the system generated timing data will be summed for each transaction type within each basket to give an overall duration for each basket entry in the 'top 20'.

4.2.1 Product Frequency

The data used to create the basket mix analysis will also be used to ascertain the volume and frequency of specific products being transacted. This ranking will be used to select the specific product to be used when identifying a specific transaction to represent a transaction type.

4.2.2 Adjustments

Certain adjustments will be made to the transaction component analysis to allow for those items that are not applicable to the counter performance assessment calculations. These are:-

- Steps involving User actions – i.e. screen observation, user input or action. For scripted transactions this will only affect the data input steps since there is negligible 'wait' time between script steps.

- Steps that have changed as a result of any changed processes or UI interactions that have been introduced in HNG-X. Examples include the introduction of any new message dialogues that require user confirmation, any changes to the sequence of user actions where a comparable Horizon sequence does not exist, any changes arising from UI Constructs that require additional user actions to perform or complete data input.

- Steps that are waiting for an external response. This assessment is concerned with the performance of the HNG-X counter and so external dialogues will be excluded. In live operation FS and POL will be monitoring the key online interactions since they are subject to Service Level Targets and their assessment will take place once a representative workload is in place. This will not be the case at the point at which this counter performance assessment takes place, just prior to Pilot.

4.2.1.1 Menu Hierarchy

The Menu Hierarchy for HNG-X has been redesigned and as such there can be no comparison with the menu navigation undertaken on Horizon. Accordingly for any transactions that are selected from menu buttons, all user selections and timings associated with menu navigation will (where possible) be reported but excluded from the comparative timing analysis, since the measurement point for all such transactions will commence with the final button selection that initiates the transaction.

4.3 Create Horizon timings

Horizon component timings will be applied to each of the transactions that make up the set of transactions for each entry in the basket mix analysis, taking account of any adjustments. These component times will be taken from the data gathered as part of the Horizon Video Benchmark analysis of S92.

It is expected that the range of transactions for this assessment will have increased from the set used for previous Horizon transaction time benchmarking, and so it may be necessary to extrapolate from existing timing data to establish values for previously unmeasured transaction steps.

The number of these will be reviewed to ascertain whether any other method of obtaining any missing Horizon component time data is practical and necessary.

4.4 Assessment Results

With the Horizon and HNG-X component time data applied to each of the transaction types for each of the entries in the 'top 20' basket mix analysis, an overall transaction time for Horizon and HNG-X will be obtained.

Comparing each basket line entry will give a view as the relative performance of HNG-X. The overall comparison is based on the timing for an average customer basket, and so the set of all entries in the basket mix analysis is adjusted by the volume of occurrences.

The average Horizon basket time is as follows: -

Basket entry 20

$\sum$ (Horizon basket time) * (Volume of baskets per entry)

Basket entry 1

$\overline{\hspace{5cm}}$

(Total volume of baskets for top 20 entries)

The same calculation is done for the HNG-X entries and the HNG-X counter performance assessment is met if the average basket time for HNG-X is less than or equal to the average basket time for Horizon.

The results of this analysis will be recorded in SVM/SDM/REP/0008 – HNG-X Counter Performance Assessment Results.

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5 Future Transaction Time benchmarking

As well as meeting the formal counter performance assessment obligation, this process establishes the foundations on which the on-going Transaction Time benchmarking Service will be based. This service will support the introduction of future HNG-X releases and will enable the effect of change, either at transaction or workload profile to be assessed.

The Basket Mix analysis and the HNG-X timings will act as the starting point from which future HNG-X Release assessments are made. In order that an accurate Release 1 position is established it will be necessary to substitute the Horizon Mail transactions with the associated Postal Services transactions in the relevant Basket entries. The HNG-X timings can then be added to complete the starting position for HNG-X Released 1.

For future releases it is expected that, subject to agreement, the same approach will be used to assess the impact of changes on the previous baselined position. This revised approach to Transaction Time benchmarking is expected to deliver the following benefits: -

- Speedier execution of the benchmark transaction set

- Speedier analysis

- More timely availability of results to facilitate feedback prior to deployment to the live estate

- Larger sample size to improve statistical confidence

- Reduced scope for human error

- More flexibility in the benchmark transaction set in response to changing customer needs

The operation of the Transaction Time Benchmarking Service is described in SVM/SDM/SD/0016 - Management Information Service: Service Description – Annex A.

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A   Extract from Schedule B6.1

The following text is reproduced from Schedule B6.1, Annex 3 version 2.0

4.   The Business Equivalence Principles do not apply to the System Capacity and Performance Requirements or associated Service Levels, but it is accepted that the performance characteristics of the HNG-X System counter applications and associated infrastructure must be acceptable to the Post Office. This specific aspect of the Solution Baseline will be assessed to determine that the HNG-X System counter performance delivers equivalent or better performance characteristics to the Applicable Horizon Baseline, based on the following principles:

  4.1 Post Office and Fujitsu Services will jointly agree an assessment process that will:

- define and agree sets of representative Transaction types and a measurement period;

- establish system component benchmark measurements for these Transaction types on the Horizon system and on the HNG-X System (taking account of any changed processes or UI characteristics that may be present in the HNG-X Transaction); and

- allow Post Office to request that the set of Transaction types is augmented (agreement to such requests not to be unreasonably withheld by Fujitsu Services) if anomalous HNG-X Transaction performance characteristics are identified prior to the commencement of the HNG-X Project Workstream X4 (HNG-X Application Rollout).

  4.2 Acceptance by Post Office of the HNG-X System counter performance will be based on the average system component benchmark measurements for each of the agreed sets of representative Transaction types for the HNG-X System being no worse than the comparable measurements for each of the Transaction types within the Applicable Horizon Baseline or where comparison is not applicable, to their agreed design targets.

B   Applicable POL Requirements

The following requirements have been identified as being applicable to the HNG-X Counter Performance assessment. Note that the details below are taken from the DOORS system as at the date of this document. The current version of all POL requirements are held in the POL DOORS system.

Original Object Id	Original Object text	Acceptance Criteria	Verification Method	Parent / Child	Acceptance Gateway
SVC-795	**A Benchmark Period shall be agreed following contract during which current business volumes and measurements of Baseline Horizon performance of daily Post Office Business and Operations, will be used to update Capacity Model peak loading and confirm other capacity assumptions for Capacity and Performance Models.**			Parent	
SVC-842	A Benchmark Period shall be agreed following contract during which current business volumes and measurements of Baseline Horizon performance of daily Post Office Business and Operations, will be used to update Capacity Model peak loading and confirm other capacity assumptions for Capacity and Performance Models.	There will be an appropriate section in a CCD or a document referred to by a CCD which contains a clause confirming this obligation. An artefact within the Solution Baseline Documentation Set will be supplied which cross references this requirement with the appropriate clause will be supplied.	DR	Child	AG3

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SVC-843	A Benchmark Period shall be agreed following contract during which current business volumes and measurements of Baseline Horizon performance of daily Post Office Business and Operations, will be used to update Capacity Model peak loading and confirm other capacity assumptions for Capacity and Performance Models.	There will be an appropriate section in a CCD or a document referred to by a CCD which contains a clause confirming this statement of fact. An artefact within the Solution Baseline Documentation Set will be supplied which cross references this requirement with the appropriate clause will be supplied	SOF	Child	AG3
SVC-798	**Analysis of data in the Benchmark Period shall be used to validate the assumptions and modelling parameters for volume of Customer Sessions that require Settlement and the number and most frequent occurring combination of products in a Session Basket.**	There will be an appropriate section in a CCD or a document referred to by a CCD which contains a clause confirming this obligation. An artefact within the Solution Baseline Documentation Set will be supplied which cross references this requirement with the appropriate clause will be supplied.	SOO		AG3
SVC-799	**The volume of Administrative and Back Office functions occurring across the Estate during the Benchmark Period shall be measured on Baseline Horizon and these adjusted according to any modified User behaviour or Business Processes expected by Post Office as a result of the move to the new System, for use in Capacity and Performance Models.**	There will be an appropriate section in a CCD or a document referred to by a CCD which contains a clause confirming this obligation. An artefact within the Solution Baseline Documentation Set will be supplied which cross references this requirement with the appropriate clause will be supplied.	DR		AG3

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SVC-805	Transaction Time Benchmark measurement shall be carried out in accordance with the Service Management Service and the method described in the Transaction Time Benchmarking, Joint Working Document (CS).	An entry in an artefact within the Solution Baseline Documentation Set will be supplied which cross references this requirement with the appropriate document and the relevant clause within the document will be supplied. The document will describe how this requirement will be catered for in the design.	DR		AG3
SVC-806	Transaction Time Benchmark evaluation shall be conducted in accordance with the process described in the document 'Counter Transaction Time Performance - measurement and results (CS/PER/046)'.	An entry in an artefact within the Solution Baseline Documentation Set will be supplied which cross references this requirement with the appropriate document and the relevant clause within the document will be supplied. The document will describe how this requirement will be catered for in the design. branches.	DR		AG3
SVC-807	New Video Benchmarks shall be defined for a limited number (to be agreed) of representative Single and multi-product Baskets that will at least include an example of each Transaction Type.	There will be an appropriate section in a CCD or a document referred to by a CCD which contains a clause confirming this obligation. An artefact within the Solution Baseline Documentation Set will be supplied which cross references this requirement with the appropriate clause will be supplied.	SOO		AG3

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SVC-808	**During testing New Video Benchmarks shall be conducted on Baseline Horizon and equivalent Video Benchmarks shall be conducted on the System, in accordance with the process described in HNG-X Test Strategy - HX/STR/001 and assessment made according to the Video Benchmarking Tolerances agreed therein.**			Parent	
SVC-855	During testing New Video Benchmarks shall be conducted on Baseline Horizon and equivalent Video Benchmarks shall be conducted on the System, in accordance with the process described in HNG-X Test Strategy - HX/STR/001 and assessment made according to the Video Benchmarking Tolerances agreed therein.	An entry in an artefact within the Solution Baseline Documentation Set will be supplied which cross references this requirement with the appropriate document and the relevant clause within the document will be supplied. The document will describe how this requirement will be catered for in the design.	DR	Child	AG3
SVC-856	During testing New Video Benchmarks shall be conducted on Baseline Horizon and equivalent Video Benchmarks shall be conducted on the System, in accordance with the process described in HNG-X Test Strategy - HX/STR/001 and assessment made according to the Video Benchmarking Tolerances agreed therein.	Performance testing during ST will demonstrate capabilities in accordance with HNG-X Test Strategy.	ST	Child	AG3

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| SVC-809 | **System Measurement of Counter Performance will be introduced in the System as a future alternative to Video Benchmarking.** | There will be an appropriate section in a CCD or a document referred to by a CCD which contains a clause confirming this obligation. An artefact within the Solution Baseline Documentation Set will be supplied which cross references this requirement with the appropriate clause will be supplied. | SOO | | AG3 |
| SVC-810 | **System Measurement of Counter Performance may be calibrated with the Video Benchmark results obtained for the System for equivalent sequences of operation.** | There will be an appropriate section in a CCD or a document referred to by a CCD which contains a clause confirming this statement of fact. An artefact within the Solution Baseline Documentation Set will be supplied which cross references this requirement with the appropriate clause will be supplied | SOF | | AG3 |

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