



HNGA ROBUSTNESS (SERVICE DELIVERY METRICS) REPORT

FUJITSU CONFIDENTIAL



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Abstract: Explanation of how the delivery of Fujitsu services is measured to support a criteria based view of HNG-A robustness.

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Name	Role	
Fujitsu	Horizon Audit Team (POA)	See Dimensions for record



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0 Document Control

0.1 Document History

Version No.	Date	Summary of Changes and Reason for Issue	Associated Change CWO, CP, CCN or Peak Reference
1.0	12/03/2021	Approved for release	N/A

0.2 Review Details

Mandatory Review	
Role	Name
Horizon Audit Team	Fujitsu

0.3 Associated Documents (Internal & External)

Reference	Version	Date	Title	Source
COM/MGT/REP/4162	Latest	Latest	Expanded Table of Contents for the HNGA Robustness (Service Delivery Metrics) Report	Dimensions
COM/MGT/REP/4168	Latest	Latest	The SDLC Report	Dimensions
COM/MGT/REP/4166	Latest	Latest	The Testing & QA Report	Dimensions
COM/MGT/REP/4165	Latest	Latest	The RA Report	Dimensions
COM/MGT/REP/4169	Latest	Latest	The BED Report (29 BED AS IDENTIFIED BY FRASER J)	Dimensions
COM/MGT/REP/4184	Latest	Latest	The BED Current Process Report	Dimensions

0.4 Abbreviations

Abbreviation	Definition
AWS	Amazon Web Services
BAU	Business As Usual
BED	Bugs, Errors and Defects
BIF	Business Impact Forum (Fujitsu attendees)
CBA	Counter Business Application
CCD	Contract Controlled Document
HORIce	Horizon Information Centre
ISMF	Information Security Management Forum
ITDSD	IT Digital Service Desk (POL 1 st line service desk)
ITSCM	IT System Configuration Management
MAC	Major Account Controllers
OBC	Operational Business Change
POA	Post Office Account
POL	Post Office Limited
RA	Remote Access



Abbreviation	Definition
RAB	Release Acceptance Board
RAM	Release Acceptance Meeting
SDLC	Software Delivery Life Cycle
SLT	Service Level Target
SMC	Fujitsu Systems Management Centre
SMR	Service Management Review
SPM	POL subpostmaster

0.5 Glossary

Term	Definition
APPSUP	Fujitsu elevated privilege (see RA Report for explanation)
HNG-A	The HNG-X Counter Business Application adapted to run on Windows operating systems other than NT4, providing all of the functionality of the HNG-X Counter Business Application.
HNG-X	HNG-X was a project that replaced the Horizon message-based branch network with the Horizon on-line branch service. Also known as Horizon Online. This was rolled out in 2010.
Tivoli	IBM Tivoli Monitoring is a suite of products performing operating systems monitoring, database monitoring and user defined monitoring. Tivoli agents are able to take local corrective action to resolve monitoring issues and also send monitoring data to a central system where it can be viewed and used for reporting purposes.

0.6 Changes Expected

Changes

0.7 Accuracy

Fujitsu endeavours to ensure that the information contained in this report is accurate but, while 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 herein.

0.8 Information Classification

The author has assessed the information in this document for risk of disclosure and has assigned an information classification of FUJITSU CONFIDENTIAL. This report is also subject to the Information Distribution statements in Section 9.



1 Executive Summary

The purpose and scope of this report is to explain how the delivery of the HNG-X services provided by Fujitsu is currently measured. This report provides POL with information to understand how Fujitsu currently provides this capability for the live environment.

On 20 August 2020, POL requested an audit of the HNG-X services by sending a letter to Fujitsu titled "Horizon Audit". Following a number of discussions between POL and Fujitsu, it was agreed by POL that Fujitsu would prepare a set of reports on key topic areas identified by POL.

This report explains how the delivery of the HNG-X services provided by Fujitsu is currently measured ("HNG-A Robustness (Service Delivery Metrics) Report"). It follows the "Expanded Table of Contents for the HNG-A Robustness (Service Delivery Metrics) Report" (COM/MGT/REP/4162) which was shared with POL on 09 December 2020.

The adaptation of the HNG-X Counter Business Application (CBA) to work with Windows devices other than NT4, known as HNG-A, was rolled out with the Branch Counter Refresh in 2017 and 2018.

HNG-X has been built and improved jointly with POL over many years. It is a large and complex IT solution that integrates with POL and its other third party suppliers. Fujitsu believes that the HNG-X services it provides are delivered effectively.

A compilation of recommendations for improvement is contained in Appendix D. The list in Appendix D collates the various action items into a single list so that POL and Fujitsu can work jointly to act on these recommendations.

POL is invited to comment on this report to seek any additional clarifications it needs. Fujitsu will endeavour to respond to any comments or clarifications requested and may, if it deems necessary, provide an updated version of this report.

Fujitsu welcomes the opportunity to provide this report.



2 Purpose & Scope

The purpose and scope of this report is to explain how the delivery of the HNG-X services provided by Fujitsu is currently measured. This report provides POL with information to understand how Fujitsu currently provides this capability for the live environment.

POL is invited to comment on this report to seek any additional clarifications it needs. Fujitsu will endeavour to respond to any comments or clarifications requested and may, if it deems necessary, provide an updated version of this report.

Fujitsu welcomes the opportunity to provide this report and looks forward to a constructive dialogue with POL.

3 Background & Introduction

On 20 August 2020, POL requested an audit of the HNG-X services by sending a letter to Fujitsu titled "Horizon Audit". Following a number of discussions between POL and Fujitsu, it was agreed by POL that Fujitsu would prepare a set of reports on key topic areas identified by POL.

The spirit of the discussions between POL and Fujitsu in relation to these reports was to share content that would allow both organisations to confirm the efficiency of the current ways of working together, and to identify ways to make meaningful improvements that would enhance the working relationships and experience for the POL branches and their postmasters. Fujitsu believes in collaboration and welcomes constructive suggestions from POL.

This report explains how the delivery of the HNG-X services provided by Fujitsu is currently measured ("HNG-A Robustness (Service Delivery Metrics) Report"). It follows the "Expanded Table of Contents for the HNG-A Robustness (Service Delivery Metrics) Report" (COM/MGT/REP/4162) which was shared with POL on 09 December 2020.

The adaptation of the HNG-X Counter Business Application (CBA) to work with Windows devices other than NT4, known as HNG-A, was rolled out with the Branch Counter Refresh in 2017 and 2018.

Fujitsu operates the HNG-X services to the service standards contractually required by POL. Fujitsu's monitoring systems and processes seek to proactively identify faults, log them as Incidents, and then work to resolve them promptly following the agreed Incident management processes. Fujitsu also relies on Incidents being reported to them by POL. These reported Incidents are also logged and worked on to identify their cause and resolution options. Thousands of Incidents have been logged—as would be expected of a system of this complexity and size.

As a general comment, it should be noted that Fujitsu is only one supplier involved in the overall delivery of end-to-end services to POL in relation to HNG-X. The HNG-X application also relies on the working partnership between POL and its chosen partners—such as Verizon, Computacenter and Atos—as well as external service providers such as banks and affiliated organisations. This applies to both the IT systems and the operational processes in HNG-X.

Although every effort has been made to avoid confusing technical jargon in this document, the very nature of this aspect of the service delivered to POL necessitates the use of many acronyms and phrases that may need expanding upon to ensure the correct understanding. Fujitsu accepts that further explanation may be necessary and encourages POL to seek these clarifications.

Fujitsu has endeavoured to ensure that the content of this report is correct as at the date of issue. This report has been prepared with the input of numerous Fujitsu individuals and attribution of any statements made in this report should be made to Fujitsu only. In preparing this report, the authors have collectively characterised and summarised many internal Fujitsu documents. They have also described processes and procedures which have been established over many years and may not be in written form. Many of the documents, processes and procedures described in this report are continuously updated and Fujitsu reserves the right to make changes to the way it works in the ordinary course of its operations and business without obligation to update this document. POL should verify the position with Fujitsu before relying upon any information or content from this document in



the future, as well as bearing in mind the requirements set out in "Information Distribution" at Section 9 below.

4 Approach

Fujitsu acknowledges that it is important to measure the service that is being delivered to POL (and hence to the SPMs). In doing so, Fujitsu can show how well the HNG-X system is working.

The starting point for any consideration of HNG-X should be to look at the wider end-to-end processes and platforms.

There are some major factors to consider when reviewing the HNG-X services provided by Fujitsu:

- HNG-X is a large and complex IT solution.
- HNG-X is running on aging platforms – many of which are out of manufacturers' support – and this is likely to continue until the migration to AWS has completed.
- HNG-X is a dynamic system that is subject to continual change.

POL and Fujitsu have worked collaboratively to create the version of HNG-X in use today based on the POL defined requirements. The management of the HNG-X services provided by Fujitsu is an ongoing activity and is necessary to keep HNG-X working. Logging and efficiently dealing with issues, whether identified by pro-active monitoring or by calls from users, helps to remove or reduce the risk of re-occurrence. Routinely handling issues assists in supporting the capability of the system and ensures that the contract obligations and SLTs are met. This is described in the Service Delivery Metrics sections below.

5 Service Delivery Metrics

This section describes 5 areas that comprise the Service Delivery Metrics:

- **Operational metrics** – the contracted SLTs and the visibility of system activity metrics.
- **Service Operations metrics** – the contracted service delivery obligations.
- **Key Interactions** – the numerous interactions (meetings & reports) between POL and Fujitsu on key topics that review and influence operations.
- **The Reports** – the 6 Reports delivered to POL (of which this is one) that provide further insight into Fujitsu's operations.
- **Business Continuity** – the obligations Fujitsu holds and how they are reviewed.

POL will have access to other data and information, both from their own systems, and those of their other suppliers, with which to supplement the contents of this report.

5.1 Operational Metrics

Fujitsu system monitoring (via IBM Tivoli software) is constantly checking platform availability and events. Events are reviewed by Fujitsu SMC and Incidents are raised. Event data is also used to report on the numerous Service Level Targets (SLTs) stipulated in the HNG-X contract. The monthly Service Management Review (SMR) meeting report shows Fujitsu's performance against those SLTs for the current month and prior months.

Appendix A shows extracts from the January 2021 SMR meeting report.

In addition, Fujitsu developed the Horizon Information Centre (HORIce) to enable its specialist support staff to see more detailed information on how the HNG-X systems are operating.

HORIce receives events from system monitoring tools and also queries the contents of some HNG-X data stores to obtain helpful information. This allows visibility into the functioning of HNG-X and not



just whether the system components are operational. Aspects of HORIce are monitored by Fujitsu SMC who review the information presented and raise Incidents. Although HORIce was developed as a support tool for Fujitsu specialist support staff, many features have been made accessible to various personnel in POL. There are currently 238 queries that POL can run to review important metrics related to HNG-X. POL utilised 66 of the available queries in the month of February 2021. Appendix B shows the range of queries available to POL. Appendix C shows screenshots from HORIce's graphical user interface. HORIce provides insight for both POL and Fujitsu into HNG-X with a combination of near real-time data and historic querying capabilities.

HORIce assists Fujitsu and POL in reviewing and identifying potential issues early so they can be raised as Incidents and actioned to reduce or remove impact on the system's performance, availability or usage, or on branch operations.

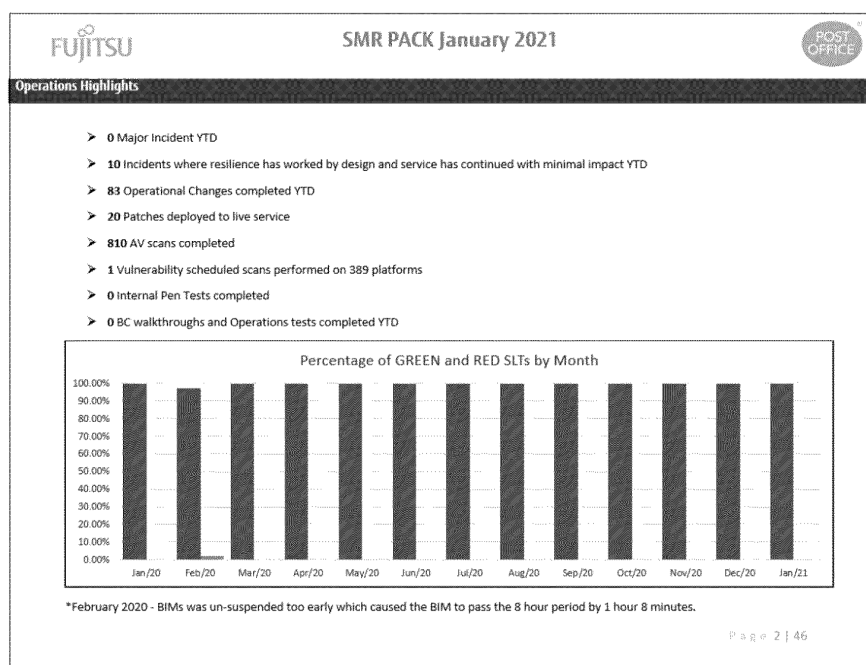
5.2 Service Operations Metrics

The Fujitsu service management toolset is used to record and track Incident, Major Incident, Problem and Change activities undertaken by Fujitsu. These activities are reported on, and reviewed if necessary, at the monthly SMR meetings. Important matters are discussed as they occur and do not wait for the SMR meeting.

5.2.1 Operations Highlights

The SMR meeting report provides an Operations Highlights view showing agreed high-level statistics.

Figure 5.2.1.A – SMR meeting report – Operations Highlights



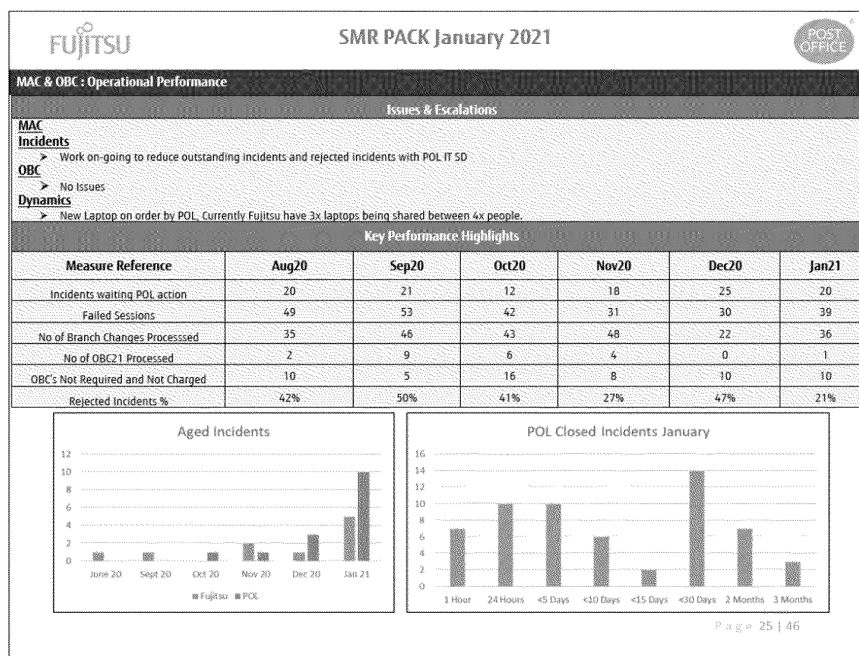
It is worth noting that the second bullet refers to "Incidents where resilience has worked by design and service has continued". An important feature of any well-designed solution is a degree of automatic resilience. This Incident count is included to show the number of occasions when HNG-X has automatically handled an issue and avoided service impact to POL and/or its branch operations.

5.2.2 Incidents

Incident data is presented to show the work of the Fujitsu Major Account Controllers (MAC) & Operational Business Change (OBC) teams. Significant Incidents are also listed and discussed.

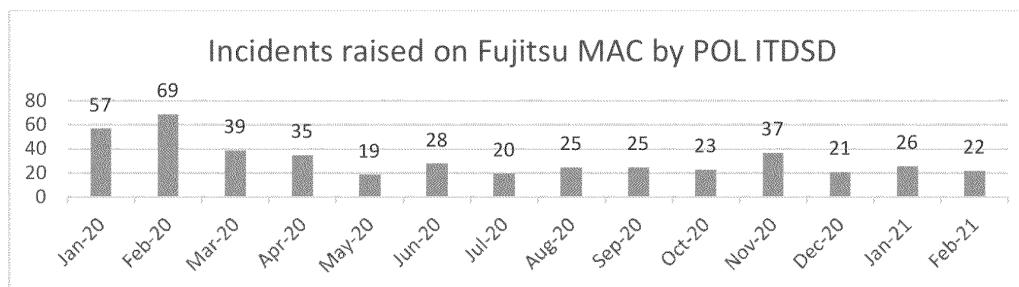


Figure 5.2.2.A - SMR meeting report – MAC & OBC: Operational Performance



Incidents raised by POL relating to Fujitsu's obligations have averaged 26 per month in the last 12 months. Fujitsu understands that the POL IT Digital Service Desk (ITDSD) receives considerably more Incidents which are not within Fujitsu's scope of support to resolve e.g. printer issues. There are no SLTs for Incident management.

Figure 5.2.2.B – Incidents raised on Fujitsu MAC by POL ITDSD



5.2.3 Major Incidents

Major Incidents are also reported and discussed. The following table is taken from the January 2021 SMR meeting report showing Major Incidents during 2020. There were no Major Incidents in January or February 2021. There have been 8 since January 2020 and all of these have been closed with no open actions outstanding.



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Figure 5.2.3.A - SMR meeting report – Major Incidents 2020

SMR PACK January 2021							
Major Incidents 2020							
2020							
Reference	MI Report Title	Date of Incident	Number of Actions	Number of Actions Completed	Actions Still to be Completed	Document status	Incident Status
SVM/SDM/INR/3989	SSK Issue 28 01 2020	28.01.2020	11	11	0	Version 4.0 - published	CLOSED
SVM/SDM/INR/3981	Licence Issue 13 03 2020	13.03.2020	7	7	0	Version 3.0 - published	CLOSED
SVM/SDM/INR/4086	Internet Connectivity Issue IRE11 & IRE19 20 08 2020	20.08.2020	6	6	0	Version 1.0 - published	CLOSED
SVM/SDM/INR/4105	REM IN Issue for Branches	10.09.2020	14	14	0	Version 2.0 - published	CLOSED
SVM/SDM/INR/4106	MI 130920 DB Patching	13.09.2020	10	10	0	Version 6.0 - published	CLOSED
SVM/SDM/INR/4138	MI 19 10 2020 and 21 10 2020 Fujitsu Network Issue	19.10.2020	8	8	0	Version 3.0 - published	CLOSED
SVM/SDM/INR/4148	MI 05 11 2020 NRP Proxy Issue	05.11.2020	4	4	0	Version 2.0 - published	CLOSED
SVM/SDM/INR/4155	FCN Issue 15 11 2020	15.11.2020	7	7	0	Version 2.0 - published	CLOSED

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5.2.4 Service Dashboard

The Service Dashboard reports on a number of high-level service operations metrics. It shows Change performance and other agreed service metrics. Customer Satisfaction (CSAT) scores (where provided by POL) are also shown. When the CSAT scores are provided, the supporting feedback is reviewed (it is also included later in the SMR report), and where needed, actions are set by Fujitsu.

Figure 5.2.4.A – SMR meeting report – Service Dashboard

SMR PACK January 2021							
Service Dashboard							
Operational Services	Month reported : January 2021	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21
Extended Hours	40 hours made available for Sunday trading in January 2021 (5 Sundays in the month) target is 25	40	32	32	40	32	40
File Transfers	The combined score of the File Transfer measures was 100%	96.77% *	100%	100%	100%	100%	100%
Major Incidents	There were no Major Incidents during the month of January 2021	1	2	1	2	0	0
Change Management	Number of BAU changes sent to POL	18	19	20	17	9	19
	% of changes raised with >3 days notice (target >50%)	100%	100%	100%	100%	100%	100%
Capacity Management (in review)	TPDS transactions in January - 7,180,249 peak day against a threshold of 10.2m contracted volume	6.4m	7.5m	6.9m	10.1m	12.2m	7.2m
Change Requests / CWOs / CCNs							
Number of change requests	Change Requests received in Month	14	12	14	10	15	8
Total No. of CWOs and CCNs Submitted	Number of CWOs and CCNs submitted in Month	10	11	20	15	22	23
Customer Satisfaction							
Annual Report (VoC)	Voice of the Customer (VoC) for 2020/21, covering Operations only has been published						
		Q4 19/20	Q1 20/21	Q2 20/21	Q3 20/21		
POA Scorecard - Operations	Scoring is now being done Quarterly	8.1**	8.0***	7.0****	7.5*****		
* An expected outcome of DR test.							
** Overall Operational Service Q4 Score(19/20) – 8.1 (Release & Change and IT Security scores not provided).							
*** Overall Operational Service Q1(20/21) Score – 8.5 (IT Security and IT Service Continuity scores not provided).							
**** Overall Operational Service Q2(20/21) Score – 7.0 (IT Security score not provided).							
***** Overall Operational Service Q3 (20/21) Score – 7.5 (IT Service Continuity scores not provided).							

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5.2.5 APPSUP

At POL's request, Fujitsu also performs non-balance impacting actions to make corrections (such as stock unit associations, emergency branch opening, or monthly tidying of despatch reports). This requires the temporary assignment of the privileged APPSUP role (see the "RA Report" COM/MGT/REP/4165). APPSUP is not used to correct branch balance discrepancies or to amend financial transactions. The use of APPSUP requires the prior approval of POL.

POL have requested Fujitsu to use the APPSUP elevated privilege an average of twice per month since January 2020.

Figure 5.2.5.A - Extract from the January 2021 Fujitsu Security Report

<i>TFSNow ref</i>	<i>Date APPSUP requested</i>	<i>Date APPSUP was Granted</i>	<i>Date APPSUP revoked</i>
INC4391361	06/01/20	06/01/20	06/01/20
INC4424596	09/01/20	09/01/20	10/01/20
INC4578838	29/01/20	29/01/20	29/01/20
INC4739526	17/02/20	17/02/20	18/02/20
INC4823722	28/02/20	28/02/20	02/03/20
INC4824263	28/02/20	28/02/20	03/03/20
INC4810249	28/02/20	28/02/20	28/02/20
INC4879692	06/03/20	06/03/20	06/03/20
INC5069711	01/04/20	01/04/20	01/04/20
INC5112767	07/04/20	07/04/20	07/04/20
INC5908612	06/08/20	06/08/20	06/08/20
INC5938493	11/08/20	11/08/20	11/08/20
INC5948682	12/08/20	12/08/20	12/08/20
INC5960310	13/08/20	13/08/20	13/08/20
INC5999291	19/08/20	19/08/20	19/08/20
INC6103727	02/09/20	02/09/20	02/09/20
INC6605309	05/11/20	05/11/20	05/11/20
INC6639576	10/11/20	11/11/20	11/11/20
INC6795573	01/12/20	01/12/20	01/12/20
INC6802704	02/12/20	02/12/20	02/12/20
INC7016469	18/01/21	19/01/21	21/01/21
INC7175823	27/01/21	27/01/21	27/01/21
INC7163052	25/01/21	25/01/21	25/01/21
INC7124061	19/01/21	19/01/21	21/01/21

5.2.6 Horizon Known Errors Review Forum

POL also operate the weekly Horizon Known Errors Review Forum attended by Fujitsu. Incidents (for which Knowledge Base articles will have been raised) with the following high-level classifications are presented at the forum:

- **SPM Financial Impact** - entries containing information which has the potential to cause financial impact to subpostmasters; and
- **SPM Experience** - entries containing information which has the potential to impact the subpostmasters' user experience.

On average throughout 2020, one new Incident per month was raised at the Horizon Known Errors Review Forum as having the potential to impact branch operations. A number of these were also outside of Fujitsu's scope of obligations and needed to be addressed by POL or its third party suppliers.



5.3 Key Interactions

There are a number of jointly-attended POL-Fujitsu meetings covering a broad array of topics. These interactions are important. Routinely working well together and acting on actual and/or perceived issues will help to support the capability of the system. In order to be effective, these meetings should:

- Occur regularly and when scheduled;
- Be properly attended;
- Be purposefully chaired;
- Document agreed minutes and actions; and
- Ensure actions are carried out in a timely manner.

A Terms of Reference should ensure that their purpose is clear and that there is limited overlap with other related meetings. Each meeting should be reviewed against the above proposed criteria (see Recommendation 1 in Appendix D).

The main touch points are listed below (in no particular order). A joint list should be reviewed and validated. See Recommendation 2 in Appendix D.

1. **ITSCM Progress Management Meeting** (formerly Business Continuity Planning Review): Monthly meeting to address continuity and contingency planning
2. **Horizon Known Errors Review Forum**: Weekly meeting to review potentially branch impacting Incidents
3. **Customer Business Impact Forum**: Weekly meeting to discuss items that have been identified at BIF for discussion
4. **Patch Approval Board**: Monthly meeting to discuss and agree the infrastructure and security patching actions required
5. **Change Advisory Board** (formerly Change Process Working Group): Monthly meeting to discuss changes
6. **Commercial and Relationship Meeting**: Monthly meeting to address commercial issues
7. **Cross Supplier Problem Review**: Fortnightly meeting to resolve issues that affect multiple POL suppliers
8. **Release Acceptance Meeting (RAM)**: Per selected release to confirm the requirements have been met
9. **Release Acceptance Board (RAB)**: Per project release to confirm that both Fujitsu and POL service organisations are ready for live deployment
10. **Acceptance Dispute Board**: Ad hoc meeting to consider and resolve RAM/RAB disputes
11. **Weekly Priority Meeting**: Weekly joint leadership meeting to review priority topics
12. **Monthly Risk Review**: Monthly meeting to identify and discuss risks
13. **Enterprise Architecture Group**: Weekly meeting (if needed) to review and approve High Level Designs and Key Design Decisions
14. **Information Security Management Forum (ISMF)**: Monthly meeting to discuss security related topics
15. **Joint Programme Board**: Programme reviews aligned with Release Acceptance Board
16. **Demand Planning Forum**: Quarterly review of service development plans and high-level planning assumptions
17. **Problem Records Review**: Fortnightly meeting to review progress of Problems



18. **Programme Review and Steering Board Meetings:** Meeting of senior staff to review activities for defined programmes (frequency appropriate to programme of work)
19. **Service Management Review:** Monthly service review meeting to discuss contractual service performance
20. **IT Ops Lead:** Weekly meeting for cross supplier service directors to review operational topics
21. **OBC19:** Weekly meeting to review Post Office Data Gateway activities
22. **Customer Service Improvement:** Monthly meeting to review SIP actions progress
23. **Service Relationship:** Fortnightly meeting to discuss updates on issues and hot topics
24. **Capacity Operational Review Forum:** monthly review with leads from POL Service/Finance & Telecomms.

Some of the meetings above are contractual so these should be reviewed as a priority. Some of the meetings above may also be appropriate to add to the contract and so this should also be reviewed. See Recommendation 3 in Appendix D.

5.4 The Reports

Fujitsu has provided six reports to POL to provide further insight into Fujitsu operations. All six reports (of which this is one) offer information and recommendations that could be used to improve the ways of working. The reports are as follows:

1. **The SDLC Report – [COM/MGT/REP/4168]**
 - Explanation of the Software Delivery Life Cycle used for Horizon Applications.
2. **The Testing & QA Report – [COM/MGT/REP/4166]**
 - Explanation of how Testing & QA is performed for Horizon Applications.
3. **The RA Report – [COM/MGT/REP/4165]**
 - Explanation of the various current forms of Remote Access.
4. **The BED Report (29 BED AS IDENTIFIED BY FRASER J) – [COM/MGT/REP/4169]**
 - A report to Post Office Ltd describing the 29 Bugs, Errors and Defects as identified by Fraser J.
5. **The BED Current Process Report – [COM/MGT/REP/4184]**
 - A report to Post Office Ltd explaining the current process for the management of Bugs, Errors and Defects.
6. **The HNG-A Robustness (Service Delivery Metrics) Report – [COM/MGT/REP/4167]**
 - Explanation of how the delivery of Fujitsu services is measured to support a criteria based view of HNG-A robustness (this report).

5.5 Business Continuity

The Fujitsu Business Continuity framework outlines the contractual obligations for HNG-X. HNG-X has been designed and built to meet those Business Continuity (BC) requirements.

- The Business Continuity Framework CCD SVM/SDM/SIP/0001 describes the contract obligations.
- An annual BC report is produced – latest is SVM/SDM/REP/4071.
- An annual Failover & Failback Report is produced – latest is SVM/SDM/REP/4111.

In the final quarter of the year, a review of the calendar year's tests and exercises is held and, based on feedback from POL, Fujitsu undertakes a planning exercise and circulates a first draft proposal of



continuity tests due for the following year, allowing POL the opportunity to review and comment where required.

The forward schedule is then updated to reflect any comments received from POL. The agreed tests are subject to change based on business demands / calendar contention, BAU operational issues and Incidents where resilience has been proven.

A review of the previous month, as well as the forward schedule, should be discussed in a formal monthly review with POL (ITSCM Progress Management Meeting – formerly Business Continuity Planning Review). The monthly progress report also goes directly into the monthly SMR report for discussion at the monthly meeting if required. See Recommendation 4 in Appendix D.

Figure 5.5.A – SMR meeting – Business Continuity

SMR PACK January 2021

Business Continuity

HNG-Branch Database –BDB to BDS in Live -January 15th to Jan 17th Deferred on 8th Jan 20201 during major CAB discussion last Friday POL requested for the re time this exercise.

HNG- Branch Database exercise got New dates 12th And 13th Feb 2021- Fujitsu raised change RequestCHG0216825 and got approval from POL cab.

For Awareness	FSC
<ul style="list-style-type: none"> ➤ Work continues on updating BC documents related to campus failover . ➤ Due to Pandemic issue, FJ UK and GDC India team invoked BC plan to work from home. ➤ B/C plans during January 2021 	<ul style="list-style-type: none"> ➤ HNG-Branch Database BDB to BDS in Feb 12th and 13th ➤ HNG-Business continuity test SAN switch 21st March 2021 ➤ HNG -Central Network-Pi11NSW201 BC Test 28th March 2021

BCP Contingency Dates 2021				
Date	Time	Test	Change	Reason for use of Contingency
17 th January 2021	05:00 (17 th) to 17:00 (18 th)	BC Contingency Slot		
10 th April 2021	10:00 to 17:00	BC Contingency Slot		
25 th July 2021	13:00 to 17:00	BC Contingency Slot		
24 th October 2021	11:00 to 17:00	BC Contingency Test		

Business Continuity Documents		
Document Reference	POA LOSS OF HNG-X ACTIVE DATA-CENTRE (IRE11) BUSINESS CONTINUITY TEST PLAN	Status
SVM/SDM/PLA/0003	BUSINESS CONTINUITY TEST SCHEDULE PLANNER	APPROVED – revision 3.3
SVM/SDM/PLA/0005	POA LOSS OF HNG-X ACTIVE DATA-CENTRE (IRE11) BUSINESS CONTINUITY TEST PLAN	APPROVED – revision 9
SVM/SDM/PLA/0006	HNG-X CENTRAL HOST SERVER BUSINESS CONTINUITY TEST PLAN	APPROVED – revision 5
SVM/SDM/PLA/0007	HNG-X BRANCH DATABASE BUSINESS CONTINUITY TEST PLAN	APPROVED – revision 3

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The SMR report also includes the forward schedule of tests that are performed every month to validate conformance to the Business Continuity obligations.

At the end of the calendar year, the 12 reports from the SMR meetings are consolidated into a formal annual report.

6 Formal Audit Reports

POL commissions an annual ISAE3402 audit as well as quarterly PCI Prioritised Approach audits on POA. Both audits examine aspects of the scope of this report from slightly different perspectives and to varying degrees of detail. Furthermore, POA are periodically requested to contribute to internal Fujitsu corporate audits to support Fujitsu UK in attaining and maintaining a variety of certifications such as ISO27001, ISO9001 and ISO22301.



7 Conclusions

HNG-X has been built and improved jointly with POL over many years. It is a large and complex IT solution that integrates with POL and its other third party suppliers. Fujitsu believes that the HNG-X services it provides are delivered effectively.

Fujitsu consistently achieves its SLT obligations and provides a breadth of information to POL, both at the SMR monthly meeting and via access to the HORIce platform. Through the consistent delivery of Incident and Change, and by the effective management of Major Incidents and Problems, Fujitsu and POL acknowledge issues and aim to resolve them promptly. POL CSAT average scores and feedback from the POL identified functions required to contribute are consistently above 7 out of 10.

POL ITDSD have raised an average of 26 Incidents per month to Fujitsu in the last 12 months and one Incident on average per month throughout 2020 was raised at the Horizon Known Errors Review Forum (and some of these were Incidents that needed to be addressed by POL or its third party suppliers).

There have been eight Major Incidents since January 2020. All actions arising from Major Incidents were addressed promptly and none remain outstanding at this time.

The privileged role of APPSUP has been used on average twice per month in the last 12 months to make POL requested and approved corrections.

The Business Continuity obligations are also regularly tested and the forward planning schedule is reviewed jointly at the monthly SMR meeting.

There is also an extensive schedule of key meetings which allows POL and Fujitsu to work effectively together to ensure the HNG-X services are delivered efficiently and that issues and ideas are addressed.

8 Recommendations

A compilation of recommendations for improvement is contained in Appendix D. The list in Appendix D collates the various action items into a single list so that POL and Fujitsu can work jointly to act on these recommendations.

Fujitsu strives for continual improvement and is committed to having an open dialogue with POL on additional recommendations that can be considered as appropriate.

9 Information Distribution

This report and any enclosed materials (the "Audit Materials") are being provided to Post Office Limited ("POL") pursuant to POL's request for an audit of the HNG-X services Fujitsu provides (the "Audit"). The Audit Materials comprise work product prepared by Fujitsu pursuant to requests from POL. Fujitsu has confined this report to the specific requests from POL and accepts no responsibility for any other matters. The Audit Materials relate to the current HNG-X environment.

The Audit Materials are confidential and provided to POL for the sole purpose of the Audit. The Audit Materials may only be shared by POL with KPMG, the external auditors appointed by POL in connection with the Audit. POL shall take all necessary precautions to ensure that any Audit Materials are: (i) not used for any purpose other than the Audit and; (ii) not disclosed to any third party (apart from KPMG), without Fujitsu's express consent in writing. In particular, it should be noted that:

- (i) the Audit Materials may contain highly confidential and sensitive information which, if disclosed, is likely to significantly increase the risk of cyber and engineering attacks on the HNG-X environment;
- (ii) the Audit Materials may contain personal data within the meaning of the General Data Protection Regulation ("GDPR"); and



- (iii) any system architectural content may be subject to copyright and/or other intellectual property rights and cannot be shared or disseminated.

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Appendix A – Service Management Review Report Extracts

The following has been extracted from the January 2021 SMR meeting report. This shows the extent of the Service Level Targets Fujitsu is required to meet as well as demonstrating consistent attainment of the targets.

Figures A.A to A.E - SMR meeting report extracts

<div style="display: flex; justify-content: space-between; align-items: center;"> <div>SMR PACK January 2021</div> </div>														
Service Review Book – Monthly Charts														
Description	Target SLA	Jan20	Feb20	Mar20	Apr20	May20	Jun20	Jul20	Aug20	Sep20	Oct20	Nov20	Dec20	Jan21
Central Network Services														
Network Availability Santander Network Availability per SLT calendar year	>=99.95 %	100%	100%	100%	100%	99.99%	99.99%	100%	100%	100%	100%	100%	100%	100%
Banking Authorization Agent Availability for Each Availability Period Number of PI outages > 2 minutes for same bank	<=1	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of PI outages > 2 minutes for different banks	<=2	0	0	0	0	0	0	0	0	0	0	0	0	0
Banking & Related Services Transaction Times Average time (T) for ALL Banking Functions Transactions across ALL Network Connections	<=2.5 seconds	0.59	0.58	0.57	0.57	0.58	0.58	0.57	0.57	0.57	0.57	0.57	0.56	0.58
Central Systems Availability Outages in Post Office Core Hours where the Central & Branch Network, Sales Database AND the Banking Solution (CAPO, A&L, LINK) is unavailable at > 10% of Branches - Per SLT Calendar Year	<=3 core hours	0	0	0	0	0	0	0	0	0	0	1.43*	0	0
Outages in Post Office Core Hours where the Central & Branch Network, Sales Database AND the Banking Solution (CAPO, A&L, LINK) is unavailable at > 10% of Branches - Per SLT Calendar Year	<=8 core hours	0	0	0	0	0	0	0	0	0	0	0	0	0
Outages in Post Office Core Hours where the Central & Branch Network, Sales Database, the Banking Solution AND Other Services (ETU, DVA, PAF, APOP, DCS) are unavailable at > 10% of Branches - Per SLT Calendar Year	<=14 core hours	0	0	0	0	0	0	0	0	0	0	0	0	0
* Related to Major Incident on 05/11/2020 - INC0301913/ INC6602989														
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HNGA ROBUSTNESS (SERVICE DELIVERY METRICS) REPORT

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SMR PACK January 2021														
Description	Target SLA	Jan20	Feb20	Mar20	Apr20	May20	Jun20	Jul20	Aug20	Sep20	Oct20	Nov20	Dec20	Jan21
Data Centre Operations														
Data Delivery: APS to PODG Failure to deliver files to PODG by 23:59 of the AP Client Delivery Day, per SLT Calendar Year	<=2	0	0	0	0	0	0	0	155*	0	0	0	0	0
Data Delivery: Outbound HR SAP HR SAP file should be delivered to PODG by 23:59 on the day following the day defined by Post Office reference data for the generation of the report	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Data Delivery: Outbound to Credence & CFS Transaction records to Credence PODG File Shared Delivery Directory - failures per SLT Calendar Year	<=2	0	0	0	0	0	0	0	128*	0	0	0	0	0
HNG-X transactions received and logged in the Data Centre between 19:00hrs and 18:59hrs daily will be available in data files in the Credence and CFS PODG File Shares and sub systems by 03:00 the day following the cut off	100%	100%	100%	100%	100%	100%	100%	100%	96.77%*	100%	100%	100%	100%	100%
*An expected outcome of DR test														
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SMR PACK January 2021														
Description	Target SLA	Jan20	Feb20	Mar20	Apr20	May20	Jun20	Jul20	Aug20	Sep20	Oct20	Nov20	Dec20	Jan21
Data Centre Operations														
Pouch collection failures per SLT Calendar Year	<=3	0	0	0	0	0	0	0	0	0	0	0	0	0
Pouch collections delivered within 48hrs of creation date	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Cash on Hand details failures to CWC per SLT Calendar Year	<=3	0	0	0	0	0	0	0	0	0	0	0	0	0
Cash on Hand details delivered within 48hrs of creation date	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Data Delivery: Reconciliation Production of Reconciliation Reports NB000, NB101, NB102 Delivery by 08:05hrs Day B - failures per SLT Calendar Year	<=2	0	0	0	0	0	0	0	0	0	0	0	0	0
Reconciliation and settlement reports, delivery by 12:00 hrs. Day B	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Data Delivery: Reconciliation (CAPO & Santander) Number of failures of REC File delivered to CAPO daily by 03:00 hrs. on Day B	<=2	0	0	0	0	0	0	0	1*	0	0	0	0	0
Number of failures of REC File delivered to Santander daily by 03:00 hrs. on Day B	<=2	0	0	0	0	0	0	0	1*	0	0	0	0	0
REC Files will be delivered to CAPO by 16:00 hrs. on Day B	100%	100%	100%	100%	100%	100%	100%	100%	96.77%*	100%	100%	100%	100%	100%
REC Files will be delivered to Santander by 16:00hrs on Day B	100%	100%	100%	100%	100%	100%	100%	100%	96.77%*	100%	100%	100%	100%	100%
*An expected outcome of DR test														
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HNGA ROBUSTNESS (SERVICE DELIVERY METRICS) REPORT

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SMR PACK January 2021														
Description	Target SLA	Jan20	Feb20	Mar20	Apr20	May20	Jun20	Jul20	Aug20	Sep20	Oct20	Nov20	Dec20	Jan21
Data Centre Operations														
Availability: TESQA TESQA availability between 07.00hrs and 22.00hrs for SLT Calendar Year - downtime must not exceed 13.5 hours	<13 hours 30 minutes downtime	0	0	0	0	0	0	0	0	0	0	0	0	0
Transaction received in the Data Centre between 07.00hrs and 22.00hrs daily will be available within 15 minutes on the TESQA for the SLT Calendar Year	97%	100%	100%	99.97%*	100%	99.99%**	100%	100%	99.99%***	100%	100%	99.99%****	100%	100%
Transactions received in the Data Centre between 20.00hrs and 22.00hrs daily will be available within 40 minutes on the TESQA for the SLT Calendar Year	97%	100%	100%	100%	100%	100%	100%	100%	98.69%***	100%	100%	100%	100%	100%
Transactions received in the Data Centre between 22.00hrs on Day A and 07.00hrs on Day B daily will be available within 4 hours on the TESQA for the SLT Calendar Year	100%	100%	100%	100%	100%	100%	100%	100%	99.97%***	100%	100%	100%	100%	100%
Transaction Times: Basket Settlement Transactions Average time for a Basket Settlement	<=2 seconds	0.51	0.50	0.50	0.51	0.52	0.53	0.51	0.51	0.51	0.51	0.52	0.51	0.52
Maximum time for a Basket Settlement (within the 95th Percentile of average Basket Size)	<=7 seconds	99.93%	99.95%	99.95%	99.96%	99.95%	99.92%	99.94%	99.94%	99.94%	99.94%	99.95%	99.92%	99.90%
*An expected outcome of the BC test held on 21st March 2020 and 22nd March 2020 and the delay on 3rd March 2020. **An expected outcome of the change CHG0163145 - Deployment of R20.17 Zombieload Patches on 2nd May 2020 and change CHG0165767 - Live security patch set May on 10th May 2020. ***An expected outcome of DR test **** Related to Major Incident on 15/11/2020 - INC0305739/ INC6669975.														
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SMR PACK January 2021														
Description	Target SLA	Jan20	Feb20	Mar20	Apr20	May20	Jun20	Jul20	Aug20	Sep20	Oct20	Nov20	Dec20	Jan21
Operational Business Change														
OBC Team All OBC Engineer Support requests to be acknowledged as being with Fujitsu within 15 minutes of receipt	95%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
All OBC Engineer Support requests to be assigned to a relevant resolving group within 15 minutes of receipt	95%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Operational Targets														
CHANGE SUCCESS RATE														
Month		Feb-20	Mar-20	Apr-20	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Cumulative
Number of OBC Change requests received		64	161	48	31	29	33	36	46	43	48	22	37	598
Number Of Changes Minus Cancellations		60	158	44	27	28	29	36	43	41	47	22	37	572
Number Of Changes That Failed Target Date		0	0	0	0	0	0	0	0	0	0	0	0	0
Crown Branches														
Number Of Changes Delivered		0	0	0	0	0	0	0	0	0	0	0	0	0
Number Of Changes That Failed Target Date		0	0	0	0	0	0	0	0	0	0	0	0	0
Target Failures - Target 2%		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0
Target Failures - Crown Branches - Target 0%		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Reconciliation														
Exception / Error Resolution Banking & Related Services Priority Exceptions or Error resolved in 8 hours or less	95%	100%	93.93%*	100%	100%	100%	100%	100%	100%	95.7%**	100%	100%	100%	100%
Reconciliation Exception or Error resolved via the BIM process within 5 Working Days	95%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
* February 2020. BIMs was un-suspended too early which caused the BIM to pass the 8 hour period by 1 hour 8 minutes ** September 2020. This was a procedural issue which has been taken up with the person involved with extra training being provided. There was no impact to this incident or any reconciliation required.														
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Appendix B – POL HORIce Queries

The following list of queries are available to POL as at 8th March 2021. This provides POL with considerable insight into the areas it has requested to be able to see.

QUERY NAME	QUERY DESCRIPTION
Archived uncashed vouchers	Uncashed vouchers value by accounting period
Archived vouchers all states	Archived vouchers value by accounting period
POR2 archived in range v2	Archived Postal Orders that were archived in the selected date range
POR2 archived on day	Archived Postal Orders that were archived on the selected day
POR2 Expired vouchers	Postal Orders that have expired including the date they were sold
POR2 Total Expired by Date Range	Expired vouchers from the Sale date
APS file schedule	Active client agreements and the days when files are delivered
APS Reconciliation Totals By Value	30 day APS totals by value
APS Reconciliation Totals By Volume	30 day APS totals by volume
Quarantined APS Transactions	Quarantined APS Transactions in BRDB
Agent to FI Statistics 1hr	Display the Network Banking agent statistics for the selected agent for the last hour from NBX Agent to FI
Counter toAgent Statistics 1hr	Display the Network Banking agent statistics for the selected agent for the last hour from Counter to NBX Agent
NON-TESQA transactions	Transaction which did not complete for selected branch in the selected period.
NON-TESQA transactions (no PAN)	Transaction which did not complete for selected branch in the selected period.
Response Code 10	Debit Card Referrals for the selected date
Response Code 56	Banking transactions declined by PinPad before R1
Branch Declaration Events	Cash/stamp declarations and variance check events between two dates
Branch Declaration Events (Live Standby)	Cash/stamp declarations and variance check events between two dates
Cash History	Increase/decrease in cash holding
Closed Branch Declaration Events	Cash/stamp declarations and variance check events between two dates
Declarations	List all declarations at the branch
Despatch and Exception Reports	List all despatch reports at the branch
Failed User Sessions	List all branches which have a failed user session
Node Removal Check	Check the branch node has no outstanding sessions or recoveries
Opening figures	Branch opening Figures for the given TP BP and stock unit
Rollover Reports	List all reports at the branch
Rollover Reports (closed branch)	List all reports at the closed branch
Suspense Account	Display the last suspense account details
Total Discrepancies	Check discrepancies accepted in each balance period
Branch Address Search	Search on part of branch name or address
Branch Information	Get Branch Details
Branch Name Search	Search by outlet name
Branch Postcode Search	Search by outlet postcode
Branch Telephone Search	Search by outlet telephone number
Branch Users	List all users at this branch (including any associated global users)
Counter Code Baseline	List the code version running on all counters at the branch



HNGA ROBUSTNESS (SERVICE DELIVERY METRICS) REPORT

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QUERY NAME	QUERY DESCRIPTION
EUM Branch Training	Users in Branch
Memos	List all memos at the branch for the last 6 months
Postal Barcodes	Daily summaries on a given day
Rep Events	All events between two dates
Rep Events (Live Standby)	All events between two dates
Stock Units	List all stockunits at the branch
User Sessions (Active)	List active user sessions at the branch
Branch Bank Deposits	Summed Bank Deposits in a specified date range
Branch Change Giving	Summed change giving in a specified date range
Branch Transaction Totals	Read all Serve Customer transactions by terminal type
Closed Branch Session Data	Read all Session data between start and end times
Mails Despatch Status	Find all Despatched and non-despatched Mails status for this office between start and end dates
NWB Txns	Read all NWB transaction data between start and end times
Pending Transfers	List all pending transfers at the branch
Pouch Despatch Status	Find all Pouch status for this office between start and end dates
Reversal Transactions	Read all Reversal transactions between start and end times
Session Data	Read all Session data between start and end times
Session Data (Cash)	Read all branch cash transactions between start and end times
Session Data (Remittances)	Read all branch remittances between start and end times
Session Data by Node	Read all Session data between start and end times for supplied node
Session Data by Product	Read all Session data and opening balance between start and end times for supplied product
Session Data with AP and Pan (Faster)	Read all Session data between start and end times
Todays Bureau Transactions	Bureau transactions so far today
Transaction Acknowledgements	Read all Transaction Acknowledgement details
Transaction Corrections	Read all Transaction Correction details
Transfers	List all transfers at the branch
User Reversal Count	Count of reversals by user by mode
HNGA Cert Refresh Count	Count of HNGA Certificate Refresh by day
All Memos (last month)	How many branches have received each memo in past month and how many branches have then read them
Branch Last Logon	Displays the time a user last logged onto a counter in the specified branches
Branches not Rolled for 60 days	All Branches that have not rolled the TP for over 60 days but have logged on in the last 60 days
Global Users (from BRDB)	List all global users (engineers trainers etc)
HNGA Cert Refresh Counter List	List of HNGA Counter Certificate Refresh
Pouch Delivery	Pouch Delivery for selected delivery day
Pouch Delivery Full	Pouch Delivery for selected delivery day
Subfiles Held	Transaction Acknowledgement Subfiles
Transaction Count Comparison	Daily count of txns by connection type
NB101 Banking total by gateway	NB101 Banking for selected routing gateway on selected day
NB101 Payment total by gateway	NB101 Payment for selected routing gateway on selected day
Active Counters in last 30 min by minute	Active nodes for the last 30 min in 1 minute intervals



HNGA ROBUSTNESS (SERVICE DELIVERY METRICS) REPORT

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QUERY NAME	QUERY DESCRIPTION
Bureau last hour transaction volumes	Bureau Transaction Volumes for the last hour in 1 minute intervals (UTC)
Counter Polling snapshot	Latest counters polling 20 minutes snapshot
Debit Card last hour transaction volumes	DCS Transaction Volumes for the last hour in 1 minute intervals (UTC)
EPOSS last hour transaction volumes	EPOSS Transaction Volumes for the last hour in 1 minute intervals (UTC)
NWB last hour transaction volumes	NWB Transaction Volumes for the last hour in 1 minute intervals (UTC)
Active Sessions	Logon-Logoff events per 5 minutes
Branch Baskets	A graph of the total branch baskets (sessions) per day
Logoff events Graph	Logoff events per 5 minutes
Logoff events Graph 30min	Logoff events per 30 minutes
Logon events Graph	Logon events per 5 minutes
Logon events Graph 30min	Logon events per 30 minutes
HNG-T transactions today	Read all Session data HiH transactions today
Hourly PayZone Txns Counts Graph	Display the PayZone vend txn counts by hour
Monthly HIH Transactions	Monthly HIH
Payzone Node Info	Get All PZ Node Details
Payzone transactions	Read all EPOS and APS Payzone transactions for the selected day
PayZone Txn Count per 10 min	Transaction count for PayZone branches for 12 hours broken down by 10 minutes
PayZone Txn Value per 10 min	Transaction value for PayZone branches for 12 hours broken down by 10 minutes
Map ALL Branch Product Transaction	Combined transactions for Horizon and HiH for the selected product on the selected day
Map HORIZON Branch Product Transaction	Transactions for Horizon only for the selected product on the selected day
Map PAYZONE Branch Product Transaction	Transactions for PayZone only for the selected product on the selected day
POL-BSP User Activity	POL BSP team user logon and query count
Receipt and Payments Mismatch 12-Feb-2021	Accounting node reference data issue
Trading_Branches_AM	Trading Branches 0700-1200
Trading_Branches_PM	Trading Branches 1200-1700
ALL DRS NB101 reports (from pbs_status)	All available NB101 reports
BRDB PBS Transactions	Extract from BRDB PBS transaction table
BRDB PBS UNDO Transactions	Extract from BRDB PBS UNDO transaction table
DRS by Status	DRS2 PBS records for a specific status
DRS count by Date and FI	DRS2 PBS records by date and FI
DRS count by Date for FI	DRS2 PBS records by date for a selected routing gateway
DRS count by Status	DRS2 PBS records for a specific status
DRS Daily Files	DRS2 PBS daily files and their totals
DRS History	DRS2 PBS history records for the selected OTR
DRS NB101 report (from pbs_status)	NB101 report by settlement date
DRS NB101 report with clients (from pbs_status)	NB101 report by settlement date
DRS OTR status	DRS2 PBS status records for the selected OTR
DRS Status Table	New DRS Proof of concept table



HNGA ROBUSTNESS (SERVICE DELIVERY METRICS) REPORT

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QUERY NAME	QUERY DESCRIPTION
Available Trading Periods	All available trading periods for branches
Current Branch Trading Periods	List current branch Transaction Periods
Estate Product list	All active products
Expected Branch Trading Periods	Expected Trading Periods for all Branches
100 pound declarations	All declarations for 100 pound bank notes
Above 1000 pound unusable declarations (coins)	All declarations for unusable coins greater than 1000 pounds value
Above 1000 pound unusable declarations (notes)	All declarations for unusable notes greater than 1000 pounds value
AP Currency SELL transactions over 5000	All AP currency sell transactions over 5000.00 in the selected time period
ATM sales	Daily ATM sales (product 7748)
Average ATM sales	Average weeks sales through ATM
Branch Bureau match	Calculated balance of Bureau products for POL
Branch Cash match	Calculated balance of Cash balance for POL
Branch Users not mapped to Smart Id	All HUIDs that are configured with a POID
Branch with Local Collect items awaiting collection	All branches with barcode items awaiting collection including a count of those more than 45 days old
Branches Not logged on	Branches that have not logged on today.
Branches not using Horizon but Open	Branches that have not logged on today with opening hours
BRS Transaction details for Product and Business Day	The transactions totals for a selected product and date
BRS Transaction details for Product and Trading Day	The transactions totals for a selected product and date
BRS Transaction totals by Day (recalc)	The aggregated totals from all branches in BRS for a Trading Day
BRS Transaction totals by Product by Day (recalc)	The aggregated totals from all branches in BRS by Product by Trading Day
Bureau Sales and Holding summary	Bureau average sales and stock holding for the estate
Closed Branch Cash match	Calculated balance of Cash balance for POL
Counters Active in Estate	All counter active in the last month
Counters Code Baseline Summary	A summary of all counter code baselines and their numbers
Counters Not Communicating	Counters that have not dialed into the BRDB for over 1 hour but has been active within 1 month
Counters Not Communicating last 12 hours	Lst 12 hours history of counters that have not dialed into the BRDB for over 1 hour
Counters Not Communicating last 7 days	List 7 days of history of counters that have not dialed into the BRDB for over 1 hour
Dangerous Goods Details	List Dangerous goods transactions including AP data
Dashboard Counters Not Communicating	Percentage of Counters per branch that have not dialed into the BRDB for over 1 hour but has been active within 1 month
DCS Response	12 hours of success Bank failed responses or Horizon failed responses
Declare Stock Button Used	Declare Stock button (23) used
Deleted User Account	User accounts deleted in the selected date range
Early Closing Branches	Branches that closed before the office hours
Estate ATM declaration details	ATM declarations for selected week
Estate ATM declaration details 2	ATM declarations for selected week
Estate ATM Declaration reports	Days for which the ATM report has been calculated
Estate ATM Declaration reports 2	Days for which the ATM report has been calculated
Estate Banking Deposits	Banking deposits for the selected day



HNGA ROBUSTNESS (SERVICE DELIVERY METRICS) REPORT

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QUERY NAME	QUERY DESCRIPTION
Estate Branches	All open estate branches with number of counters and kiosks
Estate Bureau match details	Estate Bureau totals
Estate Bureau match reports	Days for which the Bureau report has been calculated
Estate Cash details	Cash balance by branch for selected week
Estate Cash match	Calculated balance of Cash for comparison with POL
Estate Cash match reports	Days for which the Cash match report has been calculated
Estate Change Giving	Summarised Change Giving transactions for the selected day
Estate Cheque match details	Estate Cheque totals
Estate Cheque match reports	Days for which the Cheque report has been calculated
Estate Counter monthly usage detail	Transaction count for each counter in the month selected
Estate Counter monthly usage reports	Months for which the Counter Usage report has been calculated
Estate Declaration Events	Declarations from REP Events for all branches in the time period
Estate Declaration Events 2	Declarations from REP Events for all branches in the time period
Estate Events	All events for a specified EventId between start and end times
Estate Logon and Logoffs	A list of the first logon and last logoff for the select day across the estate
Estate month transactions count pt 1	Estate counters polling status and how many transactions they completed in the last month
Estate month transactions count pt 2	Estate counters polling status and how many transactions they completed in the last month
Estate Multiple Declaration Events	Multiple Declarations for all branches in the time period
Estate Packed Pouches	All Pouches with a status of Packed created in the period
Estate PinPad Properties	PinPad properties for each counter configured with a PinPad
Estate Pouch match details	Estate Pouch totals
Estate Pouch match reports	Days for which the Pouch report has been calculated
Estate Pouch reports	Days for which the Pouch Despatch report has been calculated
Estate product sales for a business date	Session data sales for the selected product
Estate product sales for a trading date	Session data sales for the selected product
Estate Stock Unit types	A breakdown of the types of stockunits at each branch
Estate Swipe Fallback	Number of pinpad swipe fallbacks on the selected day
Estate Trading hours	The actual hours against the expected hours
Estate Zero Declaration Events	Zero value Declarations for all branches in the time period
Excessive coins declared	List all branches declaring coins greater than the target quantity
Excessive ETU transactions	Count of ETU transaction by branch today
GIJ - Outstanding Transfers 1	Cash Transfers by branch for 27/03 12/04 26/06
GIJ - Outstanding Transfers 2	Cash Transfers by branch for 2selected date
GIJ - Outstanding Transfers 3	Cash Transfers by branch for selected date
Help Page Access by Page	Combined help page access counts for the selected page
Help Page Access one day	Combined help page access counts for the selected day
Inactive Rollover Events	Inactive Stock unit rollover events between two dates
Incomplete ONCH 5day summary	Branches that have an incomplete ONCH over the last 5 days
Incomplete ONCH Details	Incomplete ONCH report for the selected day
Incomplete ONCH Reports	Days for which the Incomplete ONCH report has been generated
Incomplete ONCH Stock Units	Stock Units that had an incomplete ONCH as of last night



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QUERY NAME	QUERY DESCRIPTION
Long Transfers	Transfers that took a week or more to transfer in
Mails Despatch Search	Find the mails status for a specified Barcode
New HUID accounts	SMART ID HUIDS created on the selected date
Nodes startup and PowerOff events summary	Summary by branch over the last 28 days
Old HUID accounts	HUIDS with no POID mapping
One Day of Transfers	Count of Transfers on the selected day by Branch stock unit, node, user
Orphaned declaration items	Declarations items that should have been archive but remain reported to POL Cash Centre
Percentage of Branch counters not comm pie chart	Percentage of Counters per branch that have not dialed into the BRDB for over 1 hour but has been active within 1 month
Percentage of Counters Not Communicating	Percentage of Counters per branch that have not dialed into the BRDB for over 1 hour but has been active within 1 month
Postal Barcode items awaiting collection	Postal items awaiting collection by date range
Pouch Despatch details	Estate Pouch values for the selected period end
Quick balancing declarations	Declarations made with a discrepancy that then balanced perfectly within a minute.
Smart ID Confirmed identity	Rep events where a user must confirm their identity
Smart ID Curricula and product groups	All products under restricted trading
Smart ID Deny Identity	Rep events where a user denies the identity
Smart ID missing essentials	Rep events where a user has one or more missing essential curricula
Smart ID Prevented Sales	Rep events where a user was prevented from a sale
Smart ID prevented sales 2	Rep events where a user was prevented from a sale
Smart ID Soft Launch Products by Branch	List all details for this branch
Smart ID to Branch Users mapping	All HUIDs that are configured with a POID
Smart ID to Branch Users mapping part 1	All HUIDs that are configured with a POID
Smart ID to Branch Users mapping part 2	All HUIDs that are configured with a POID
Smart ID to Branch Users mapping part 3	All HUIDs that are configured with a POID
Smart ID to Branch Users mapping part 4	All HUIDs that are configured with a POID
Smart ID User Curricula expiry part 1	All smart IDs and their curricula dates
Smart ID User Curricula expiry part 2	All smart IDs and their curricula dates
Spoilt label count by branch	Number of spoilt labels form each branch in the selected date range
Stock Pouch Delivery Report	Stock Pouch Delivery for the selected day
Stock Unit Events	Stock unit create/delete events between two dates
Top 100 5-day Transfers	List count of 5-day transfers per branch in last month
Top 100 Transfers in last 30 days	List count of transfers per branch in last month
Top 30 Pending Transfers	Count pending transfers older than 5 days by branch
Top 30 Pending Transfers (No Crown)	Count pending transfers older than 5 days by branch
Top 30 Pending Transfers by Value	Top pending transfers older than 5 days by value by branch
Top 30 Pending Transfers by Value (no crown)	Top pending transfers older than 5 days by value by branch excluding crown offices
TPS Transaction totals by Branch	The aggregated totals from all branches in BRDB (from TPS)
TPS Transaction totals by Branch (recalc)	The aggregated totals from all branches in BRS
TPS Transaction totals by Product (recalc)	The aggregated product totals from all branches in BRS



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QUERY NAME	QUERY DESCRIPTION
TPS Transaction totals by Trading Day	The aggregated totals from all branches in BRDB (from TPS)
Transactions in wrong BP or TP	List transactions for the selected branch and day that were made after the TP/BP rollover
User first logon today	First logon of each user today
Counter Reboots during the day - summary	Node summary count of windows Startup Shutdown Poweroff events for the last 48 hours
Slip/Tally printer initialisation failed events	HNG-A counter events for the selected node in last 7 days

Appendix C – HORIce Screenshots

HORIce is a graphical user interface that allows POL, and Fujitsu, to watch and query HNG-X activities. The following are some screenshots that can be seen by running some of the queries shown in Appendix B. Some include explanatory feature descriptions to aid understanding. Many of the images are intentionally of old data for privacy reasons.

Figure C.A – Live Query

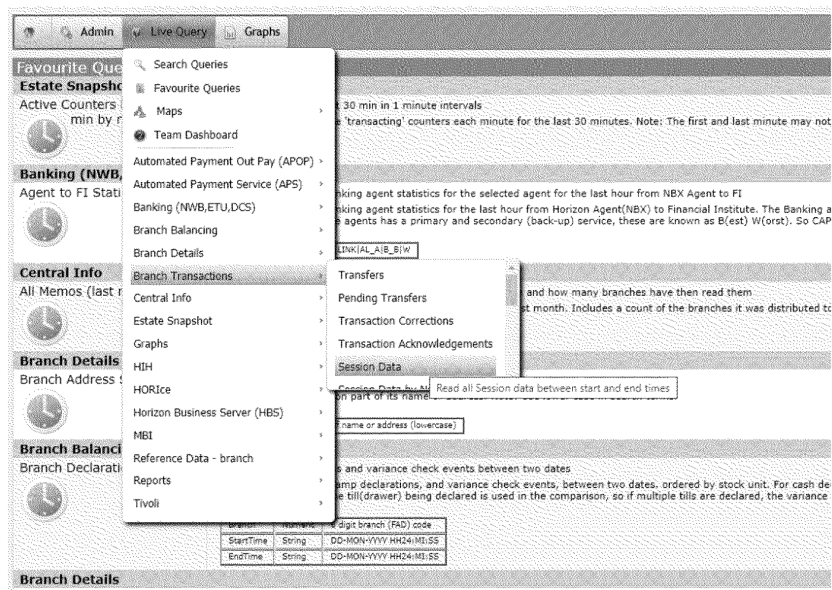
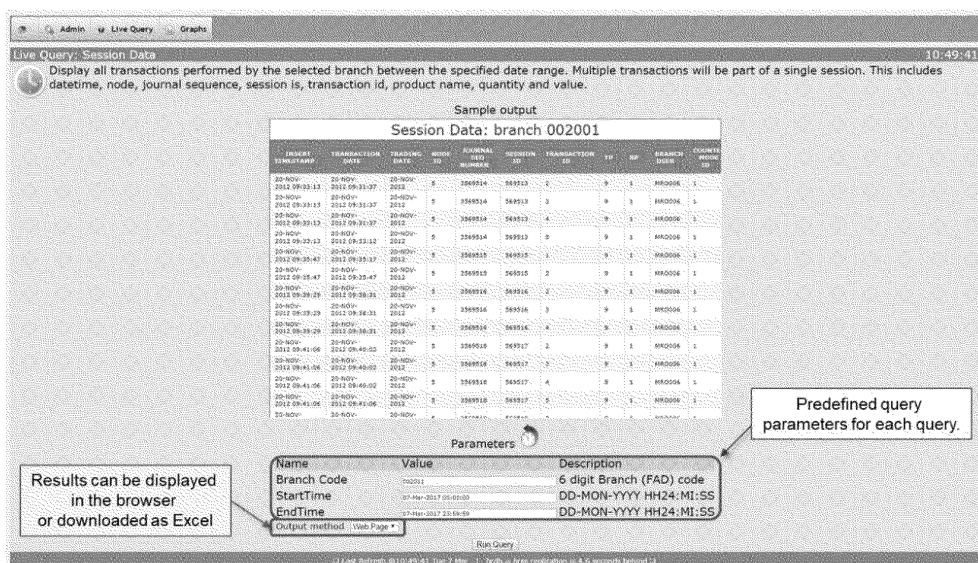


Figure C.B – Live Query – Parameters – Session Data





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Figure C.F – Dashboard views

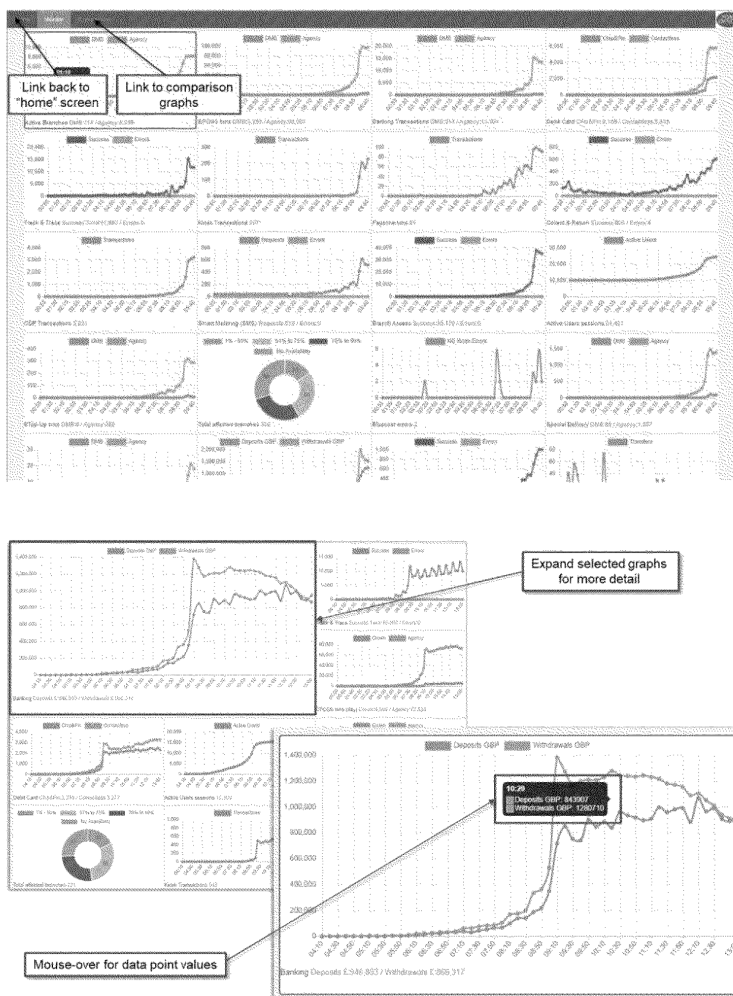
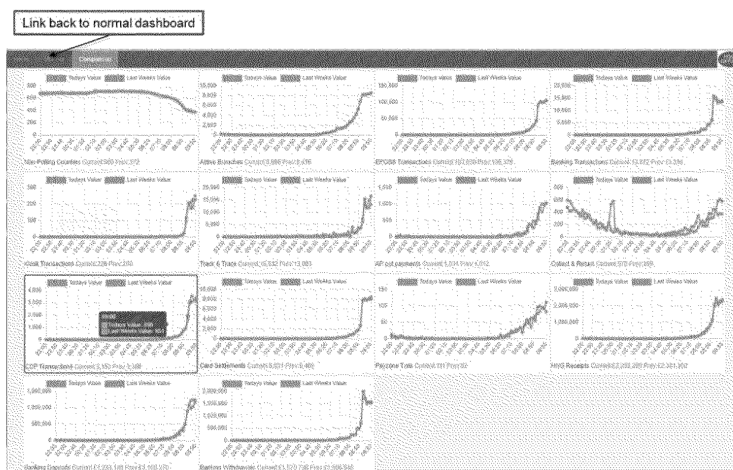


Figure C.G – Dashboard comparison view





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Figure C.H – Lockdown comparison view

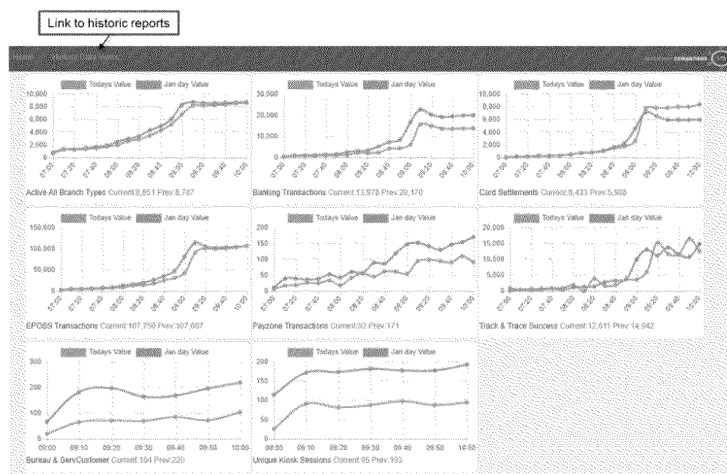


Figure C.I – Branch Dashboard view (trial only)

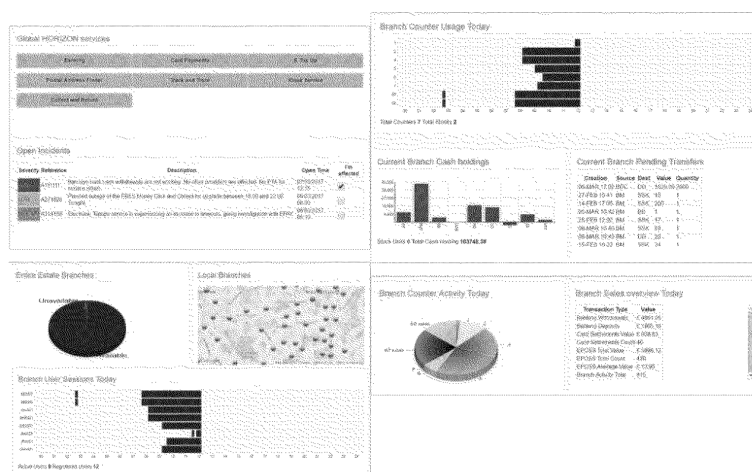


Figure C.J – Maps

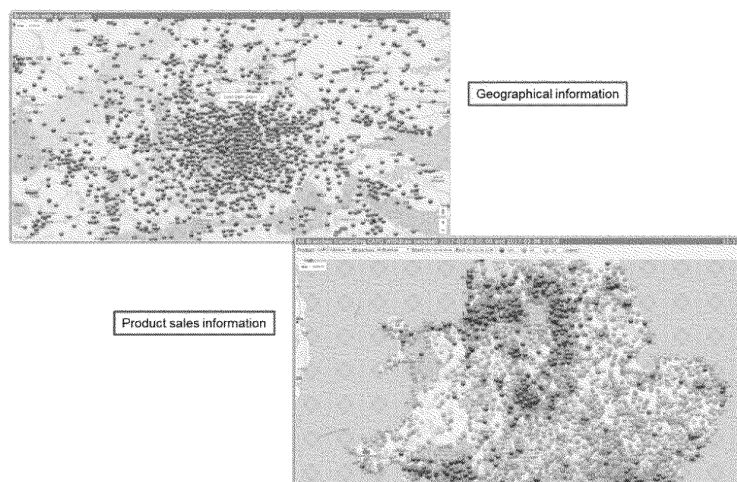


Figure C.K – Counters Offline

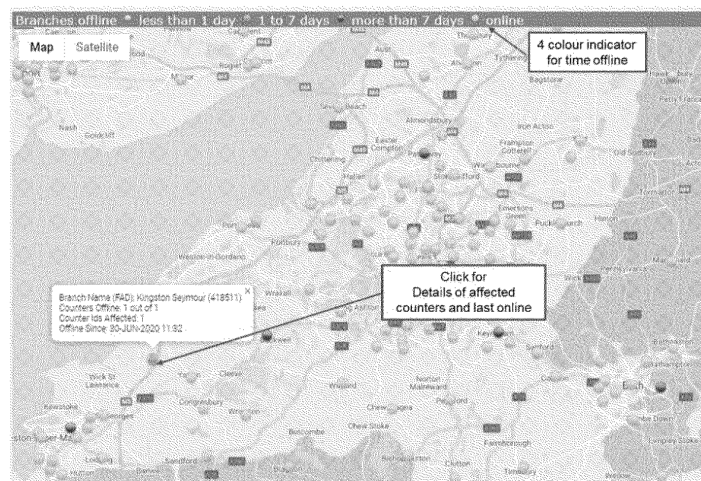


Figure C.L – Logon today

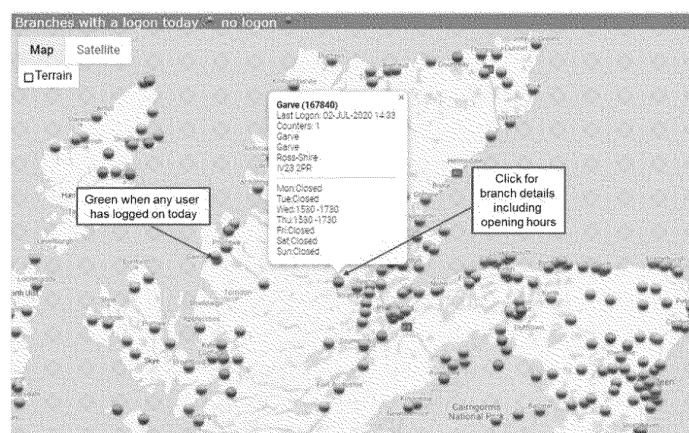


Figure C.M – Transaction sales (pins)

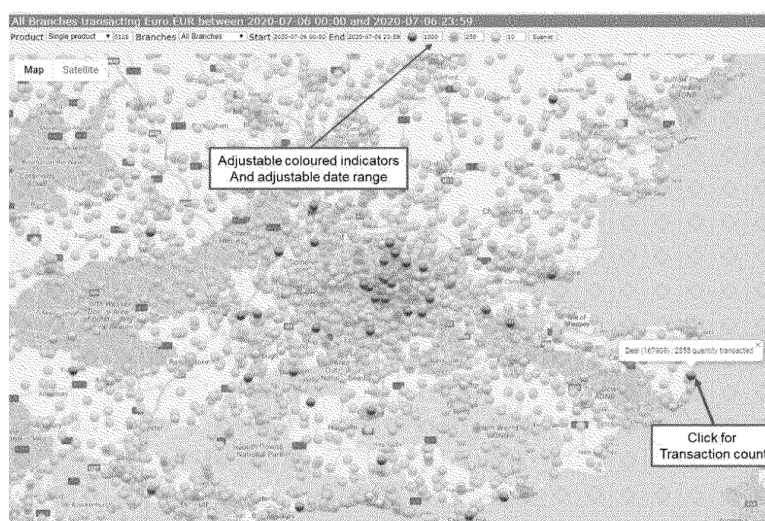
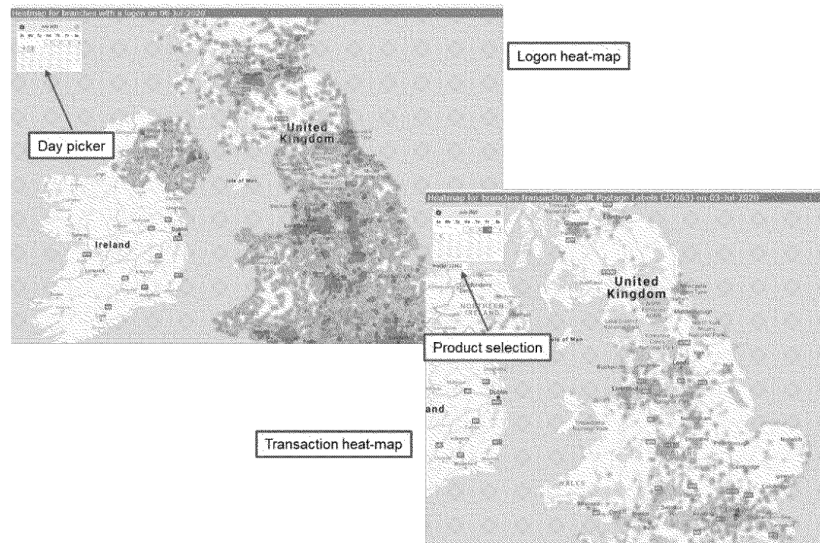




Figure C.N – Heat maps





Appendix D – Recommendations

A compilation of recommendations for improvement options is contained here. This Appendix collates the various action items into a single list so that POL and Fujitsu can work jointly to act on these recommendations.

Fujitsu strives for continual improvement and is committed to having an open dialogue with POL on additional recommendations that could be further considered where appropriate.

Ref	Recommendation
1	Review the scope and agenda for the key interaction meetings
2	Review and consolidate the Fujitsu and POL key interaction meetings lists
3	Update the contract to include any key interaction meetings currently not captured
4	POL to update the schedule for the joint ITSCM Progress Management Meeting
5	POL to identify any additional data that it needs
6	POL to review SPM training and processes for HNG-X and update if necessary
7	POL to review its usage of HORIce