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Witness Name: Peter William Jobson

Statement No.: WITN0482_01 Exhibits:

WITN0482_01/1 – WITN0482_01/9

Dated: 4 August 2022

POST OFFICE HORIZON IT INQUIRY

FIRST WITNESS STATEMENT OF *PETER WILLIAM JOBSON*

I, *MR PETER WILLIAM JOBSON*, will say as follows:

INTRODUCTION

1. I am a Customer Solution Architect level 3 ("**CSA3**") in the Host development team at Fujitsu Services Limited ("**Fujitsu**"). I have been in this role since September 2009.
2. This witness statement is made on behalf of Fujitsu to assist the Post Office Horizon IT Inquiry (the "**Inquiry**") with the matters set out in the Rule 9 Request provided to Fujitsu on 11 March 2022 and a series of further questions provided to me by the Inquiry on 1 July 2022 (the "**Request**"), to the extent I have direct knowledge of such matters.
3. The Request relates to matters that took place more than 15 years ago. Where I was involved in these matters, I have tried to recall events to the best of my ability, but my recollection is limited.
4. In preparing this statement, I have refreshed my memory by reviewing contemporaneous documents relating to questions asked by the Inquiry in the Request. Where I have seen documents relevant to the Request, these documents

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are referred to using references WITN0482_01/1 – WITN0482_01/9 and are listed in the index accompanying this statement. To the extent that these documents have not already been provided to the Inquiry, they are exhibited to this statement.

BACKGROUND

5. In July 1997, I was invited to join ICL PLC ("**ICL**") as a contractor working in the Host development team, where I worked on Oracle database design and development. I primarily worked on backend database applications and the development of the payment authorisation system ("**PAS**") and Card Management System ("**CMS**") being delivered by the software company Oracle UK ("**Oracle UK**") to supply benefit payments for Post Office branches, known as the "**PAS/CMS Project**". I worked in this role until the PAS/CMS Project was cancelled. After this time, I worked on other data-centre based database systems including the Fujitsu Data Warehouse. I left ICL in June 2001. During my time at ICL, I initially reported to Bill Hillyard, who reported to Terry Austin. Later, I reported to Chris Humphries. At this time I had no concerns with the Oracle Relational Database product nor did I have any concerns with the quality of the team from Oracle who were initially responsible for the design and development of the PAS/CMS Project.
6. I returned to work for Fujitsu as a full-time employee around June or July 2003 and re-joined the Post Office Account, taking up responsibilities similar to those that I had previously as a contractor. I worked on various database subsystems including the Transaction Processing System ("**TPS**"), Logistics Feeder System ("**LFS**"), Data Reconciliation System ("**DRS**"), Network Banking Persistent store ("**NPS**"), Transaction Enquiry Service ("**TES**") and AP-Out Payments ("**APOP**"). During this

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time, I primarily reported to Dave Johns, who reported to Alan D'Alvarez. I left this role and Fujitsu in March 2006. During this time I do not recall having concerns in relation to the function or robustness of TPS, LFS, DRS, NPS, TES or APOP.

7. I returned again to Fujitsu in September 2009 as a CSA3 and re-joined the Post Office Account in the Host development team. During this time, I was involved in the process of implementing the HNG-X solution and ongoing functional change as required by Post Office Limited ("**Post Office**"). As a CSA3, my role included the following tasks and responsibilities:
   a. I liaised with business requirement owners and derived software designs to meet these requirements
   b. I liaised with development, test and delivery teams to ensure that the business requirements were correctly interpreted by the design and software deliverables, including by helping testers to understand test outcomes
   c. I performed other activities requested of me by my line manager, including reviewing design and interface documents, engaging with auditors and providing live support
8. Until 2006 I belonged to the Host Database development team that would have reported into an overall Development manager. After 2009 I belonged to an Architecture Team that also reports into an overall Development manager. When there are live affecting issues, these are currently managed by the Customer Services team who ensure that there is sufficient interaction between internal teams, Post Office and any affected 3rd party clients.

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9. All of my previous roles have involved database design and development, including in relation to the implementation of the Horizon IT system (the "**Project**") and the IMPACT Programme ("**IMPACT**"). However, I had limited involvement in those aspects of the Project concerning Post Office branch trading, which is operated using counter applications. I was not, for example, involved in the design, development, testing or roll out of counter applications to Post Office branches.

THE REQUEST

10. I have reviewed the topics listed in Appendix 1 of the Request, and I am able to provide information in response to certain questions under the following topics: Design and Development, Acceptance Criteria and Testing, and Modifications.

DESIGN AND DEVELOPMENT

Key stages in the design and development of Horizon

11. During the period up until 2000, the design and development of the PAS/CMS Project followed a waterfall methodology, which I explain at paragraph [12] of my statement below. Most of the Oracle design and development was performed by Oracle UK before this responsibility was transferred to an ICL team (which I only know as the A&TC team) based in Dublin. Oracle UK implemented internal peer reviews of designs, test plans and test outcomes. During this period I was also responsible for designing interfaces to the Data Warehouse system. For example, I authored the 'PAS/CMS MIS Data Extract High Level Design' dated 2 April 1998 (WITN0482_01/1).

12. As I mentioned at paragraphs 5–6 in my statement above, I left ICL in June 2001 and returned to Fujitsu in June or July 2003. From the period 2003 onwards, the design

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and development of the Horizon IT system ("**Horizon**") also followed a waterfall methodology. Designs of the database applications were created and reviewed at a high level ("**High Level Designs**"), which were then used to generate more detailed low level designs ("**Low Level Designs**") before development started. This process was subject to quality controls and change management processes, with peer reviews at all levels from 'End-to-End' designs, High Level Designs through to Low Level Designs, coding and testing. Each type of design document had its own list of mandatory reviewers that could vary according to the subject matter of the document. The review process was controlled by a document management team who ensured that the review process iterated until all comments were resolved. A document would only be approved and moved to a 'major version' once all comments were responded to satisfactorily. Generally, development would only begin once the design document had reached its first 'major version'. This design and development methodology was used in relation to IMPACT, which I describe and explain further in this statement at [31] below.

13. As I mentioned in this statement above at paragraph [6], from the period 2003 onwards, I was mainly involved in one aspect of the Project, being Oracle database design. My primary role was to take an end-to-end design proposal ("**Design Proposal**") that was created by one of the leading architects and create a more detailed High Level Design covering the component(s) that were my area of responsibility. One exception to this was my work with the automation of cash pouch remittances, where I documented the design at all layers of the architecture; I cannot recall why I was asked to or otherwise documented this design.

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Oversight of the design and development of Horizon

14. There were many teams working on different aspects of design and development within the Project, including a counter development team, a team responsible for all Riposte development and On-Line/Bulk Banking agents, and the Host development team of which I was a member. These multiple design and development streams operated in parallel. Generally, members of one development team worked in one layer of the architecture and did not have involvement in other parts of the system. The individual teams communicated with each other to ensure that different parts of the system interfaced together to produce a coherent solution. The senior management and architecture team for the Project had a more overarching view of the end-to-end development of Horizon.
15. Each team would have implemented its own development processes and procedures. This was because the nature of the layers of the architecture are different. The counter application is a GUI (graphical user interface) that was originally written in Basic and latterly in Java (which are programming languages), the Agent team dealt with real-time or near-real-time messaging systems using different technologies, and the Host team implemented Batch processing systems in Pro*C, PL/SQL and shell scripting (which are also programming languages). The development and unit testing needs of each environment are different. I do not know what controls were in place to ensure that development processes and procedures were adequate.
16. There were also different layers of management and oversight. I do not recall who was responsible for carrying out and overseeing the design and development of Horizon.

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Factors influencing the design and development of Horizon

17. During the period 1997 to 2001, I was not involved in the decision-making at the Project and senior management level as to the design and development of Horizon, such as making decisions as to the choice of architecture, or the choice of product to implement that architecture. For this reason, I cannot identify and explain the specific factors which influenced the design and development of Horizon.

18. I can recall however that quality and design standards dictated how the Host development team would design and develop databases and interface databases with each other. For example, I can recall contributing to the 'Host Applications Database Design and Interface Standards' dated 29 April 1999 (WITN0482_01/2), which related to best practice for implementing data centre Oracle database applications. This provided rules for any database design in order to meet the business need of robust and supportable software, including:

    a. Standards (naming and coding)
    b. Best principles (resilience, recovery, auditing, archiving)
    c. Supportability, monitoring
    d. Languages, defensive programming, performance
    e. Self-containment and interfacing
    f. Security
    g. Documentation requirements

19. However, most database applications were initially only required to store, aggregate, transform and forward data; for example, taking transaction data from the counters to consumers, such as the Management Information System, Central Financial Systems

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or Automated Payment clients. Or alternatively, transmitting the data in the other direction, such as sending reference data from Post Office to Riposte. In time, additional database systems were implemented: DRS to reconcile Banking and Payment Card transactions, TES to provide Banking reconciliation and transaction query and APOP to support transaction persistence for a range of counter data including Postal Orders and other data objects. Latterly the branch database was implemented to store all Post Office branch data ("**Branch Database**"). Other database systems that I have not had much involvement in are the Reference Data Management Centre (RDMC) and the Reference Data Distribution System (RDDS).

ACCEPTANCE CRITERIA AND TESTING

20. As designers and developers, the Host development team would have been responsible for Low Level Design and testing from the unit test perspective.

21. This would involve testing all functional code paths to ensure they had been exercised, that their responses were as expected, and that they met the requirements and functionality described in the High Level Design. These tests and their results would be peer reviewed before any deliverable was handed over to the integration team. The integration team were responsible for packaging software deliverables such that they could be released into test and live environments in a controlled and repeatable manner. The integration team and release management would co-ordinate software deliveries from different development teams together and release these out to the integrated test rig(s) such that dependencies between software versions at each layer of the architecture were met. Currently there are the following test environments:

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a. Development - Unit testing

b. CIT - Counter application testing integrated with a limited data centre

c. SV&I - Functional test environment with emulators simulating external entities such as financial institutions

d. LST - Live support test, non-functional testing and software release testing

e. RDT - 4 sets of test rigs devoted to testing new reference data

22. Once handed over to the integration team, I was not involved in aiding the testing process, and I am not aware of what methods were used from an integrated test perspective. From the period 2009 onwards I have had more involvement with the integration test team including knowledge transfer, helping with the creation of test data and occasionally reviewing test plans and test outputs.

MODIFICATIONS

The IMPACT Programme

23. IMPACT was related to, but not limited to, Post Office's migration away from the cash account to monthly accounting, and the implementation of the Post Office Limited Financials System ("**POL-FS**"), which was operated using a system provided by the software company, SAP ("**SAP**"). IMPACT was called the End-to-End Re-Architecture programme in its early days ("**E2E**"), and some scope of the programme is provided in High Level Design documents, including the documents that I refer to below.

24. As part of the first E2E project ("**E2E Project 1**"), I was responsible for modifying some cash logistics designs that better automated the remittance in of cash pouches at Post Office branches and provided better control of the remittance out of cash and its subsequent collection by delivery drivers. Post Office made the decision to modify

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some cash logistics processes as part of the 'E2E Release 1' project that was active in 2003 and 2004. Details of this work are described in technical documents, including the following:

a. 'LFS E2E Release 1 – Delta High Level Design' dated 19 January 2004 (WITN0482_01/3)

b. 'E2E Release 1 – LFS Counter Dialogue Delta – Activity & Screen Flows' dated 5 January 2004 (WITN0482_01/4)

25. As part of E2E Project 1, I was responsible for modifying some counter and central database system designs to provide cash liability totals for Post Office branches to POL-FS. Details of this work are described in 'End to End Release 1 – High Level Design' dated 19 January 2004 (WITN0482_01/5) ("**E2E R1**"). I produced E2E R1, which concerned the delivery of two projects under release 'BI3 S60', which led to changes to the LFS and TPS.

26. As part of the third E2E project ("**E2E Project 3**"), I was involved in the designs for migrating Post Office branches from their old accounting system (which I only know as 'CBDB') to POL-FS, by migrating data feeds coming from the Post Office's branch estate to Post Office's backend financial systems. I do not recall having concerns about the migration process prior to undertaking it nor being aware of any known issues at the time. This process involved making changes to the counter estate and the 'Store and Forward' system in the datacentre, known as TPS. Details of this work, including the scope of IMPACT, are described technical documents, including the following:

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a. 'Impact Release 3 - Counter Design for Declaration, Correction and Revaluation' dated 8 September 2005 (WITN0482_01/6)

b. 'Impact Release 3 – Declaration, Correction and Revaluation User Interface' dated 9 September 2004 (WITN0482_01/7)

c. 'TPS POL FS Summarisation High Level Design' dated 19 August 2005 (WITN0482_01/8)

27. The TPS system was originally responsible for capturing data from the Riposte messaging mid-layer and aggregating this data before passing it onto external consumers of the transaction data and financial information. In 2009 and 2010, TPS took its data feed from the Branch Database and it was eventually retired in 2020 since its business functionality had been subsumed into the Branch Database application.

28. As part of E2E Project 3 I was involved in the delivery of summarised data from TPS to the 'HRSAP' system for the purposes of postmaster remuneration. This project also included the processing the receipt of 'Transaction Corrections' from POL-FS and forwarding this information to Post Office branches. Details of this work, including in relation to the HRSAP system, are described in 'TPS HR SAP Summarisation & Transaction Corrections High Level Design' dated 24 November 2004 (WITN0482_01/9).

29. Between 2003 and 2006, the work of the design and development teams working on IMPACT was driven by a number of software releases ("**Software Releases**"). I was involved in designs for some of these releases, and I recall being involved in releases

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that were delivered under IMPACT, which I have described above at paragraphs [24]–[28].

30. During the IMPACT programme, Software Releases would cover changes to both the counter applications and the datacentre applications. Generally, the process would involve a Solution Architect preparing a Design Proposal, which pulled together the end-to-end impact of the changes that were required to the individual layers of Horizon's architecture to meet Post Office's requirements. At the time, I was not aware of any problems new Software Releases could cause, and it was not part of my role at that time to be made aware of such problems.

31. The Design Proposal would be a High Level Design that covered the entire solution and would be reviewed by each of the teams at each layer of the architecture (e.g., counter development team, Riposte team or Host development team). The Design Proposal would be commented upon, and then each of the individual teams would produce High Level Designs that would meet the requirements of the Design Proposal. These High Level Designs would then be used to formulate and produce Low Level Designs that provided the more technical design aspects of the application. My 'layer' was the database layer, and I developed and produced the designs for the datacentre and occasionally the counter. This included the High Level Designs and occasionally Low Level Design documents, such as E2E R1, which I mentioned above at paragraph [25]. At page two of this document is a section titled 'Review details' that lists the various individuals who were required to or otherwise reviewed E2E R1, including which reviewers returned comments.

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32. The individual teams would only generally work on their layer of the architecture. For example, I could be involved in the 'S90 release' from a database perspective, but not have fully appreciated or understood the design and development that was occurring for the counter application despite their interaction with one another. This was generally the job of the Design Proposal to knit the layers together.

33. Post Office's business requirements would often affect all the layers of Horizon's architecture, and a member of the Architecture team would liaise with all the subject matter experts ("**SMEs**") to determine how the end-to-end flow of data would work. For example, if Post Office's financial systems required additional information from Post Office branches, this would involve:

    a. A change to the Counter Business Application

    b. A change to the transport layer that delivers the information to the data centre

    c. A change to the database schema to store the new data

    d. A change to the data centre application to deliver the new information to the final consumer

    After the Architecture team had defined the overall data flows in the Design Proposal, individual SMEs for each component were then responsible for updating their existing High Level Design, and once that new function was implemented, the Design Proposal would become redundant. Design Proposals, now known as 'Customer Solution Proposals' and 'Project Solution Designs' become stagnant once the change for those new requirements has been implemented.

34. Post Office have new business requirements whenever there is an opportunity to improve the system or provide new services to customers. The impact of a new

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requirement of Horizon generally involves a change to either the software and/or system configuration.

35. Fujitsu's design and development teams continue to work based on the model I have described above. The architecture is layered, and the teams are responsible for their respective aspects of the Horizon system (now 'Horizon Online'). For example, there are agents that operate on Microsoft Windows operating systems, Oracle database applications and employees who are experts in the counter or the Branch Access Layer ("**BAL**"). High Level Designs and Low Level Designs are maintained for each one of these components of the system.

36. My work on IMPACT also involved modifying the way in which cash pouches were remitted in and remitted out from stock units in the Post Office branch. When cash was remitted out from a stock unit into a cash pouch, the value of cash would be transferred into the suspense account until the pouch was collected by a delivery driver. At the point of collection, the value of cash in the collected pouches was transferred out from the suspense account such that it was no longer the liability of the Post Office branch. Other changes may have been made to the local suspense account that I am not aware of.

Technical issues identified during the pilots of Horizon Online

37. I recall there being a technical issue during the first pilot of Horizon Online around November 2009, as I started monitoring the datacentre batch schedules to see whether the system was experiencing performance issues at the backend. The second-line support team identified that the transfer of data from the Branch Database to TPS was causing an issue because four highly configured Oracle nodes

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were pushing data into a Solaris box, which was overloading it from a network perspective. The issue was discovered because the overnight datacentre batch schedules failed at the point of delivering data to TPS, and the issue was initially overcome by manually resubmitting the failed batch jobs. The issue was permanently resolved by controlling resources in the batch schedules to reduce the number of concurrent data feeds to the Solaris system, which lessened the data load and prevented the issue from reoccurring. The issue was internal to Fujitsu and it could not have had an impact on data integrity, as there was a process of data reconciliation between the Branch Database and TPS systems to prove data integrity, and failed processes relating to batch jobs could be run again.

38. I recall there being a second technical issue in May or June 2010 where rollout had to be paused due to performance issues and there were two reasons:

    a. Oracle clearing its cache when we truncated tables

    b. The BAL was not using bind variables in its queries, which was causing unnecessary work for the Oracle cost base optimiser

39. I was not closely involved in this second issue, which was managed and resolved by the database administrators, who investigated the performance problems. One of the key players in this research and resolution was Andy Beardmore. Post Office were aware of the second issue as the rollout of Horizon Online was temporarily paused until the issue was resolved.

THE ROBUSTNESS OF HORIZON

40. I was not aware and did not have any concerns regarding the robustness of Horizon during the time of my involvement in the Project.

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41. I was not involved and am not aware as to what information ICL Pathway may have provided Post Office Counters Limited and/or the government about the robustness of Horizon.

Statement of Truth

I believe the content of this statement to be true.

Signed: 

Dated: 4TH AUG 2022

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INDEX TO FIRST WITNESS STATEMENT OF PETER WILLIAM JOBSON

Exhibit Number	Description	Date	Control Number	URN
WITN0482_01/1	PAS/CMS MIS Data Extract High Level Design	2 April 1998	POINQ0123687F	FUJ00117516
WITN0482_01/2	Host Applications Database Design and Interface Standards	29 April 1999	POINQ0104394F	FUJ00098223
WITN0482_01/3	LFS E2E Release 1 – Delta High Level Design	19 January 2004	POINQ0123710F	FUJ00117539
WITN0482_01/4	E2E Release 1 – LFS Counter Dialogue Delta – Activity & Screen Flows	5 January 2004	POINQ0123700F	FUJ00117529
WITN0482_01/5	End to End Release 1 – High Level Design	19 January 2004	POINQ0104395F	FUJ00098224
WITN0482_01/6	Impact Release 3 - Counter Design for Declaration, Correction and Revaluation	8 September 2005	POINQ0097261F	FUJ00091090
WITN0482_01/7	Impact Release 3 – Declaration, Correction and Revaluation User Interface	9 September 2004	POINQ0096418F	FUJ00090247
WITN0482_01/8	TPS POL FS Summarisation High Level Design	19 August 2005	POINQ0097117F	FUJ00090946
WITN0482_01/9	TPS HR SAP Summarisation & Transaction Corrections High Level Design	24 November 2004	POINQ0096498F	FUJ00090327