STATEMENT OF MARK ROBERT DYMOCK

Name	Mark Robert Dymock
Address	Known to Ashurst
Occupation	Project Manager
Date	4 June 2013

I state that:

1. In this statement I deal with my involvement in the Queensland Government's Shared Services Program (**SSP**) and the Queensland Health Implementation of Continuity project (**QHIC Project**) and, in particular, certain matters raised in the statements of Mr Brett Cowan, Ms Janette Jones, Ms Jane Stewart, the expert report of Dr Manfield and the oral evidence of these witnesses.

QUALIFICATIONS AND EXPERIENCE

2. I started work in information technology in 1994. I was initially employed by Centerlink to support and test a number of family payment and pension systems. When I left Centrelink I was working as 'UAT Test Lead' on a major payment systems implementation.

3. I have been employed by IBM since 1999, in the following roles:

   a. I was initially employed as a software tester, and worked in that role for approximately one year;

   b. in 2000 I took on the role of testing team lead for projects; and

   c. in 2001 I started working in the role of testing manager. In this role I was the leader of IBM's Brisbane Test Centre. Later, this role expanded to also include Test Delivery across Canberra and Melbourne.

4. I have worked on testing for a number of significant IT projects in my time at IBM. For example:

   a. As Test Manager for a large software development project for Telstra I ran system testing, system integration testing and performance testing;

   b. As UAT Manager for the IBM FMS system, which consolidates global financial data from all IBM geographies worldwide and calculates sales commissions, I oversaw User Acceptance Testing and performance testing;

c. As UAT Manager for Centrelink's Welfare to Work Phase 2 initiative, I managed a team of 30 IBM and Centrelink staff in Brisbane and Adelaide to perform user acceptance testing of Centrelink's payments systems;

d. As Test Delivery Centre Manager, I was responsible for successful test delivery across all IBM Test Practice engagements in Brisbane and Canberra and all Telstra account work in Melbourne.

5. I am currently employed by IBM as a project manager and I am presently managing a software development and implementation project for a Brisbane-based natural resources company.

ROLE IN THE QHIC PROJECT

6. I first became involved in the Shared Services Project and the LATTICE interim replacement project (the **QHIC Project**) in the latter half 2007. After IBM was appointed as prime contractor to CorpTech, I was appointed as the test program manager for the SSP.

7. I became more directly involved in the QHIC Project in about September 2008. From that point I managed system testing, system integration testing (**SIT**) and Parallel Payroll Testing for the QHIC Project.

8. Later, towards the end of the project in January 2010, I replaced John Gower as the QHIC Project Director. In my role as test manager I would attend the project directorate meetings from time to time. In my role as Project Director I was part of the project directorate.

OVERVIEW OF TESTING ON THE SHARED SERVICES PROJECT

Scope definition

9. For software testing of the kind routinely conducted by IBM to be done properly, it must be conducted against agreed specifications. The aim of the testing is to determine to what extent the product, as built, meets and performs in accordance with agreed specifications.

10. The high level functional scope for the QHIC project was originally documented and signed off in a document entitled QHIC Scope Definition (**Scope Definition**). The system architecture was further recorded in a document entitled QHIC Solution Blueprint (**Solution Blueprint**).

11. The more detailed business requirements to be tested were defined in further, more detailed documents setting out the business processes and other technical requirements

for the software as it was to be built. A list of one category of these documents, Process Design Reports ("PDRs"), appears at pages 21 and 22 of the QHIC Master Test Plan v 1.

12. I was not directly involved in the preparation of the Scope Definition or the Solution Blueprint, but I am familiar with these documents and referred to them during my involvement in the QHIC Project.

QHIC Master Test Plan

13. Statement of Work 8 sets out the deliverables for the QHIC Project, including those relating to testing. The overarching document which identified the test plan, listed as a deliverable in Statement of Work 8 for the QHIC Project, was the QHIC Master Test Plan.

14. The plan was developed by John Musker and was signed off as an accepted deliverable in or before August 2008. I was not involved in its preparation.

15. After I became involved directly in the QHIC project as test manager I was involved in amending the QHIC Master Test Plan with members of the QHEST team such as Jack van der Zwan and Amanda Doughty, together with Brian Frederick from CorpTech. This was a little after Change Request 61 had varied the scope of the work to be performed, and testing had therefore been extended. The final version of the QHIC Master Test Plan (version 1.4) was ultimately signed off on a formal basis on 17 December 2009. But the initial plan and subsequent revisions formed the basis for the testing which started in the second half of 2008.

16. The operation of the software was compared against the defined scope of the work which was to be performed. The relevant documents, against which the testing was originally to be performed, were set out at the QHIC Master Test Plan v. 1 as follows:

    a. the business process scope requirements, and the documents which link together to define them, as set out at page 21 and 22;

    b. the Workbrain modules and components identified at paragraph 5.3;

    c. the RICEF items listed at paragraphs 5.4 and 5.5.

17. The QHIC Master Test Plan then identified the tests which were to be conducted by IBM. I expand on what is involved in those testing processes further below. These were:

    a. testing of the new codes and configuration as part of the build phase – this is known as unit testing. This testing was carried out by IBM's Development teams as part of each build exercise;

b. stand alone testing of each of SAP and Workbrain in isolation, then end-to-end testing of business transactions which use both pieces of software – this is known as system testing;

c. testing of the interfaces between SAP, Workbrain and external interfaces (for example the interface with QSuper) – this is known as systems integration testing;

d. parallel payroll testing – which involves running test scenarios through the then existing software systems and the proposed new systems, and comparing the results.

18. The Master Test plan also set out exit criteria for when a phase of testing would be considered completed. These were, in turn, set out in the completion report for that testing phase. In respect of those sign offs, a team of representatives of Queensland Health would formally sign off. Those representatives were listed on the Deliverable Acceptance Sheets. The State also retained the services of K J Ross & Associates Limited (**"K J Ross"**) to assist in the test assurance role. For the System Test and System Integration Test, in which I was involved, Scott Asmus of K J Ross was listed as one of those signing off or being consulted as a stakeholder to confirm that the testing had been satisfactorily completed. The QHIC Master Test Plan v. 1 set out, at page 74, the defect severity level definitions and defect priority definitions as agreed with Queensland Health and CorpTech. These definitions remained the same through to the final version 1.4 (see pages 41 and 42). The Master Test Plan and Strategy v1.4 also sets out, at page 48, a test schedule which reflects when the relevant tests were proposed to be carried out. This schedule provided for the testing program to be completed by 11 December 2009.

Requirements Traceability Matrix

19. Originally, the ability to trace and track the requirements for the test cases was to be managed through the Mercury (subsequently, HP) Quality Center (see paragraph 8, v. 1, QHIC Master Test Plan), a software tool maintained by CorpTech. Quality Center was also used for problem management (see paragraph 12, v. 1, QHIC Master Test Plan). The use of Quality Center was continued throughout the testing process. The software provided the ability to track defects and issues identified in the testing process in considerable detail.

20. However, the ongoing changes to scope made it more difficult for the test team to track what was currently in scope against issues identified in the testing process. Accordingly, my team created a "Requirements Traceability Matrix" (**RTM**) which documented each business requirement that was in scope (with several levels of detail), the source of that requirement, and how that requirement was to be tested.

21. Michelle Williams of IBM began preparing a draft RTM for my review by September 2008. Ms. Williams sent that initial draft to me and John Musker on 9 September 2008 for our review and input.

22. A copy of the RTM in essentially its final form, being a version provided by IBM to KPMG in 2010 in the course of its review of the project, is exhibit 105 before the Commission.

23. The far right hand column of the RTM identifies specific test cases. An identification number for the relevant test case number used in Quality Center appears in the second last column. The document then identifies in other columns, to the left, corresponding documents which define the relevant scope and to which those test cases relate.

24. The RTM was in a constant state of flux. This was because requirements changed as a result of the various change requests raised over the course of the project.

25. The document had been shared with Queensland Health, at the latest, by late 2008.

26. I can recall providing a copy of the RTM at least to:

    a. Philip Wang of CorpTech, who was performing an internal audit, in December 2008;

    b. Jack Van der Zwan of Queensland Health and Brian Frederick of CorpTech on 9 January 2009, to assist them with the performance of upcoming User Acceptance Testing and help them scope their testing;

    c. Pierre Pienaar and Amanda Doughty of Queensland Health on 27 July 2009, to ensure that QHIC and QHEST were aligned on requirements and source documents to be used, as well as addressing potential gaps or discrepancies already identified. It was also provided to Brian Frederick of CorpTech at this time;

    d. Janette Jones of Queensland Health and Jane Stewart of CorpTech on 12 November 2009 to assist with the identification of possible defects during User Acceptance Testing.

TESTING

System and System Integration Testing

27. System and system integration testing was carried out from September 2008 through to 25 January 2009. It involved testing over 40,000 test cases. The time to complete the testing was longer than originally anticipated, in part, as a result of additional work required to be undertaken as a result of Change Request (**"CR"**) 61.

28. System testing was undertaken to verify that individual solution components functioned as specified individually and also when brought together to form part of the Workbrain/SAP HR Payroll Solution. This included negative and error testing to verify functions.

29. System testing involved the following key elements:

    a. SAP system testing;

    b. Workbrain award interpretation (to verify payment calculation groups);

    c. Workbrain leave processing tests (accrual, takings etc);

    d. Workbrain front-end tests (Multi Viewer Scheduler (**"MVS"**), schedule compliance, time and attendance, reports);

    e. Workbrain/SAP testing (to verify mapping from Workbrain to SAP and passing of extract files);

    f. End to End testing (to verify the end to end solution design and functionality, from Workbrain data entry through to SAP payroll);

    g. HR/FI integration, through to the creation of the posting documents; and

    h. Automation of batch processes.

30. The same kind of system testing process was also applied to any new work performed under approved Change Requests and for defect fixes.

31. System integration testing was undertaken to verify that each of the interfaces from the Workbrain/SAP solution met the design requirements for each external application interface listed in "Interfaces in Scope for QHIC" (see section 6.6 of the Master Test Plan v1.4). This involved verifying that files were created and sent to the external application with data formats and content as per the agreed interface design, and that data could be processed/loaded by the target system without error.

32. Queensland Health provided the relevant test data and test records for this process.

33. IBM was responsible for testing that this data was sent in the defined format to other systems which required the data. QHEST was responsible for testing with the other systems to ensure that they could use that data for their own applications. This was known as "External Application Testing".

34. The interface between Workbrain and SAP was a focus of both system and SIT testing. This is reflected in the System Test and SIT Completion Report. We ran 408 tests for the SAP to Workbrain interface, 1,791 tests for the Workbrain to SAP interface and 306 E2E

test cases. We also ran a further 118 tests for external interfaces (for example, QSuper). At paragraph 14 of Brett Cowan's statement he discusses what he refers to as the "Interface Contract", and the need to conduct proper integration testing. By "Interface Contract" I understand him to be referring to the need for a proper interface design specification of the interface. Given the type and number of tests conducted by IBM concerning integration, as outlined in this paragraph, I consider proper attention was given to testing the integration of the system. This testing was conducted against the interface design specification agreed with the State.

35. The results of the system testing were as follows:

a. Workbrain system testing resulted in only two failed/blocked tests out of a total of 37,059 test cases run. The two that were failed were in the Reports component and were Severity 3 defects.

b. The SAP system testing was completely successful with all 904 test cases passing.

c. Similarly, testing of the SAP to Workbrain interface and the Workbrain to SAP interface was completely successful, with no defects.

d. in the End to End testing, there was one Severity 3 defect in the scenario of "Std Pay with Workbrain initiated changes".

36. The QHIC System Test and SIT Completion Report dated 27 April 2008 recommended exiting from those phases of the project. Of the 41,695 test cases run, only 47 open issues remained unresolved, which were coded as Severity Levels 3 and 4.

37. On 23 April 2009 Scott Asmus of K J Ross conducted an audit of a draft of this report in conjunction with interviewing myself and Kathy Squires. Mr Asmus identified 15 items for observation and commentary in relation to the report. He summarised those comments by stating that the draft document showed a willingness to provide an accurate record, noting that it had some typographical or counting errors. One important item identified by Mr. Asmus, which was said to require urgent attention, involved a reconciliation of the RTM then being used by IBM with the Quality Centre records and test cases.

38. On 30 April 2009 I sent an email to Scott Asmus setting out my responses to his observations. In relation to the issue with the RTM I noted that he had not reviewed an up-to-date version of the document. An up-to-date copy was provided to him to review.

39. Following subsequent review by Mr. Asmus, additional wording was added at paragraph 3.5 of the report to the effect that K J Ross had been able to satisfy themselves that the links between the execution results of the tests and the RTM had been established. Jack van der Zwan of CorpTech sent me an email on 11 May 2009 noting that Scott Asmus had agreed to the wording at paragraph 3.5.

40. The QHIC System Test and SIT Completion Report was accepted, and the Deliverable Acceptance Sheet records it was signed off by a panel of 10 reviewers. The Deliverable Acceptance Sheet also recorded that the reviewers were satisfied that the relevant links to the RTM for the test cases had been established.

Sign off on deliverables in respect of testing IBM deliverables

41. The Project Completion Report – Test Completion Report – was ultimately signed off as accepted on 17 December 2009. This document identified each of the IBM deliverables for the testing work undertaken by IBM, and the fact that they had also been signed off as accepted. These deliverables were:

    a. the QHIC Master Test Plan v 1.4 (accepted on 17 December 2009);

    b. the Test Cases and Schedule (accepted on 17 December 2009);

    c. A to G Test Phases Completion Report (accepted on 17 December 2009). That report in turn listed the work products which were previously accepted test reports:

        i. Systems Test Phase Completion Report (accepted 1 May 2009);

        ii. SIT Test Phase Completion Report (accepted 1 May 2009);

        iii. PPRT Phase Completion Report (accepted 31 July 2009);

        iv. PPV Testing Phase Completion Report (accepted 16 December 2009);

    d. the Payroll Performance Validation Test Plan (accepted on 31 August 2009); and

    e. the Parallel Payroll Test Plan (accepted on 17 December 2009).

42. I understand that there is question about what visibility the customer had into system testing and SIT by IBM. My response to this is as follows:

    a. the QHIC test team contained about four to six CorpTech staff for the entire duration of testing, who were to take part in system testing and SIT. This was to ensure CorpTech had skilled staff for post "go-live" support and testing. These team members had complete access to, and knowledge of, our testing and status;

    b. Queensland Health SSP staff were involved in validating the data used for Workbrain system testing, and sat with the test team;

    c. weekly system test status meetings were held, to the best of my recollection, up to the beginning of UAT. To the best of my recollection, these meetings were attended by Jack van der Zwan (from Queensland Health), Sallyanne Pengelly (also from

Queensland Health), Brian Frederick (from CorpTech) and Amanda Doughty (from Queensland Health).

d. I do not recall ever refusing or avoiding scrutiny of our system testing or SIT – either on this project or on any other. That has never been my philosophy or approach.

USER ACCEPTANCE TESTING

43. Under IBM's contract with CorpTech, UAT was to be done by Queensland Health (QHEST). The K J Ross report of 27 January 2010 (the **UAT Completion Report**) incorrectly identifies the phases of testing which were undertaken. These more correctly were:

a. "UAT Shakedown", in fact not a phase of actual UAT (the report incorrectly refers to this as UAT1);

b. UAT1 and UAT2 which were two aspects of the one phase of testing (the report refers to this as UAT2);

c. UAT3; and

d. UAT4.

44. What is listed as UAT 1 in the UAT Completion Report prepared by K J Ross was simply, as it is also described, a UAT Shakedown test, the purpose of which was not to provide a formal test of the software but to familiarise the UAT testers with the testing process and environment. Jack van der Zwan, the QHEST Technical Delivery Lead, outlined the purpose and expectations in an email on 27 November 2008:

> **What to expect in week 1?**
>
> Given the status of data load, E2E System Testing and recent CorpTech outages, we should expect teething problems and down time in the first week.
>
> **What to expect overall?**
>
> For the proposed 18 days of the shakedown I expect the following outcomes:
> < 20% of test cases will pass.
> ~50% of test cases will not be able to be completed or will result in defects.
> 10 - 20 downtime either due to having to manually run interfaces or due to outage or system failure.
> Some of the test cases will be incorrect.

45. The testing referred to in the UAT Completion Report as UAT2 was actually the first formal UAT execution.

46. Problems were encountered with this round of UAT (UAT2) and it was suspended. K J Ross prepared a report dated 17 March 2009 into the reasons why this occurred.

47. The subsequent UAT exercises were called UAT3 and UAT4.

48. UAT3 began on 6 May 2009 and ran until 17 August 2009. By this time, as I note above, K J Ross had audited and signed off on the Systems and System Integration Test Report prepared by IBM.

49. UAT4 (including regression testing) was conducted from 3 September 2009 to mid January.

50. During UAT, IBM used the RTM to help assess what were changes and what were true defects. I met with Janette Jones, Jane Stewart, Brett Cowan, other business analysts from Queensland Health and the QHIC SAP and Workbrain development leads on a daily basis to discuss what defects had arisen, agree their severity levels, get updates on fixes, and discuss whether they were true defects or changes. IBM's approach was that any defect that related to functionality, as contained in the latest approved specification documents, was in scope. The RTM was used in this instance to more quickly locate the relevant approved specification. If the defect related to functionality other than what was set out in the latest approved specifications then it was, as far as IBM was concerned, a change to scope. Queensland Health and CorpTech had access to the RTM but did not acknowledge that this document was an accurate reflection of the complete scope. They did not ever produce any alternative document to me which set out what they said was in scope.

51. Towards the end of UAT any defect (or other matter) that could not be agreed in the daily meetings was referred to a weekly meeting between myself, Janette Jones, someone from Queensland Health (usually Naomi Du Plessis, the QHEST Project Manager) and Jane Stewart from CorpTech. Sometimes we resolved the issue, though some issues remained unresolved. The weekly meeting itself was not minuted, but a defect management spreadsheet was updated after each meeting to record whether relevant defects had been agreed as being actual defects, changes or remained in dispute. The final version of that spreadsheet was ultimately included in the Go Live Solution and Defect Management Plan.

K J Ross report of 27 January 2010 and the statement of Mr Cowan

52. Brett Cowan of K J Ross prepared the UAT Completion Report following the conclusion of UAT. The report focused on what it described as a very high level of defects as the basis for making its recommendations. It identified the following specific issues:

    a. the functional and business process coverage of the test cases and scope of testing;

    b. the quality of the system testing performed by IBM;

    c. the total duration and several time extensions of the UAT;

    d. the number of defects discovered during the UAT;

e. the outstanding defects at the end of the UAT period; and

f. residual risks.

53. IBM, CorpTech and Queensland Health prepared a response to that Report ("QHIC Project Management Response to K J Ross User Acceptance Test Completion Report") dated 19 February 2010 addressing each of the findings of the K J Ross report. I wrote the IBM component of the response. It sets out what, based upon my testing experience and involvement in the QHIC Project, I considered to be the problems with that report and the analysis it contained. I expand on those comments as follows.

54. Software will always have defects after it is built. The purpose of testing is to identify those defects and to remedy the vast majority of them before a system is put into production.

55. The number of items identified during UAT as defects was, in absolute terms, high. From my recollection, there were roughly equal numbers of defects found in relation to SAP and Workbrain.

56. In a normal project, in my experience, it would be usual for there to be up to an approximately 30 per cent initial failure rate of individual system tests (that is, one in three tests will not pass). Later in the testing process, and by the time the system reaches UAT, I would expect that rate to fall to less than 10 per cent. In this context, the number of items reported as defects in UAT4 were high compared to what I would have expected based on my experience with other projects.

57. There are a number of possible explanations for a high number of defects reported in UAT. In relation to the QHIC Project, I believe the number of UAT defects were higher than usual for the following reasons.

58. *First,* the items labelled as defects identified during UAT, and aggregated on pp. 3 – 4 of the UAT Completion Report, included a number of different types of defects. The types of defects included:

a. valid functional and system defects ("true" defects);

b. defects incorrectly raised due to a lack of tester knowledge of:

i. the process and/or requirements against which testing was to be performed; or

ii. the system steps needed to successfully run the test;

c. defects incorrectly raised due to incorrect data. This could be because the tester had created incorrect data for their test case so the test could not run properly, or because incorrect data was migrated into the UAT environment, or because the UAT

environment had not been set up properly by the UAT team (eg incorrect payroll dates being used);

d. duplicate defects;

e. defects raised in relation to documentation only, meaning a UAT tester would use a certain workflow or training document to conduct the test, and if the documented workflow or process was wrong, a defect would be raised. No system change was needed, just a change to the document; and

f. items that were in fact new or changed requirements.

59. The UAT Completion Report records on p.19 that approximately 24% of the severity 2 defects identified during all rounds of UAT were duplicates, "no defect" or were not reproducible. In my experience, this is an unusually high number of "false positive" defects. The breakdown on p.19 does not disaggregate how many of the "defects" were in fact changes to scope. I do not now have a record of how many of the defects arose from new requirements. However, by way of illustration, in May 2010, I asked Michelle Williams to conduct an analysis of the RTM to identify the requirements that were changed or added since the beginning of UAT3 that IBM ultimately agreed to address in good faith, without requiring a formal change request and at no additional cost. Ms Williams identified 181 of these changed requirements. On 20 May 2010 I received an email with that analysis from her.

60. *Secondly,* Queensland Health continued to change the business requirements against which the system was to be tested during the build and testing process. In a normal project these business requirements would be largely static by the time UAT commenced. As the proposed processes and requirements continued to change, the test cases become out of date quickly, giving an incorrect 'fail' result. The system itself also had to undergo further late changes, leading to an increased likelihood of further defects. We mitigated this risk as far as was possible by conducting system testing of the code changes (including regression testing) before returning the updated code to UAT, but the risk of constant requirement and code change cannot be removed completely.

61. In this context I was surprised that the UAT Completion Report of 27 January 2010:

a. did not attempt to analyse, in any detail, the cause or consequence of what it identified as defects. It is fundamental to assessing the impact of UAT results to have an understanding of more than just the raw defect numbers. This was a large, complex solution by any measure (in terms of lines of code, number of components, integration requirements, business rules, business changes, employees). A solution like this will always have more defects than more simple systems, but there was no attempt to analyse the number of defects *relative to* the size of system being tested;

b. contains no substantive interpretation of the test results, particularly from a business standpoint. It does not identify the impact on the business, or its employees, of the defects. The report focuses on the number of defects and not their impact. Raw defect numbers alone do not provide sufficient context for decision making, risk assessments or any conclusions with respect to system testing. The UAT Test Completion Report gave little indication of the status and impact of each of the key business processes (eg Terminations, ALCS, Leave balances, Leave Requests) to enable the business teams to make an informed decision as to whether to proceed to go-live.

62. At paragraph 15 of his statement to the Commission, Brett Cowan suggests that he would expect errors to be limited to matters of business process. I do not agree with that observation based on my experience – it is not uncommon, particularly in complex solutions, for functional errors to be identified in UAT.

63. At paragraph 20 of his statement Brett Cowan says that his report stated that the defects identified were symptoms of fundamental problems with the system, which ought to have been identified by earlier testing. For the reasons outlined above, I also disagree that those statistics reflected poor testing at earlier stages.

64. At paragraph 23 of his statement Brett Cowan comments on the paragraphs I drafted in the response to his report of 19 February 2010. I respond, adopting his paragraph numbering:

a. my comments on the results were based on my involvement in responding to the UAT process at that time. I disagree that they were misinformed. I have otherwise commented in this statement (above) as to why I made those comments;

b. as outlined above, I disagree that the points made at page 6 of the response were misconceived. The size and complexity of the solution, as well as the reasons for what were identified as "defects" were relevant to assessing the relevance of the numbers reported by K J Ross;

c. I still hold the view that the report lacks any detailed analysis of the numbers it reports;

d. I accept that Brett Cowan was not involved in the earlier phases of the UAT process.

65. At paragraph 35 of his statement, Brett Cowan says that his reports showed a very large number of severity 1 and severity 2 defects. His report lists the total number of defects he says were identified over the course of UAT4 in section 3, and only those which remained open at the time of exiting UAT4 as at 18 December 2009 in section 6.2.2. The remaining

defects were those listed in the Defect Management Plan. There were no severity 1 defects identified by that time.

66. In paragraph 40 of Mr Cowan's statement to the Commission, he refers to a General Worksheet report dated 1 September 2009. I have not previously seen this report and have now been shown it. My comments on it are as follows:

a. Item 4 of the report refers to gaps in UAT coverage and problems with Quality Center not being properly updated with the results of test cases. I agree these problems existed in UAT. It is consistent with my observation that UAT did not adequately address all key business processes and that the UAT statistics could be misleading.

b. Item 6 of the audit report refers to the severity ratings being "watered down". I do not agree with this statement. The severity ratings of some defects were changed to meet board-agreed revised criteria for Severity 2 defects as those where net pay was impacted. This was done as a once off exercise to exit UAT 3. These severity ratings were not used during UAT 4.

c. The conclusion section of the paper raises two items:

i. The first item refers to UAT Testing Coverage not being sufficiently comprehensive. It attributes this to test execution rates (but does not reference the issues raised in item 4 which could also be an explanation). I would expect the test pass rate of 13% at this point in time early in UAT 4 to be low. Most tests would not have been run at this time. It is not necessarily indicative of the outcome of the whole of the UAT process.

ii. The second item states that the end-to-end testing could not be completed and that there was no flexibility in the schedule. Both of these statements were ultimately untrue, as the UAT4 timeframe was extended to allow for additional testing, and at the end of UAT 4, the UAT Completion Report records that all end to end testing had been completed, with a pass rate of 99%.

67. In paragraph 42 of Brett Cowan's statement to the Commission, he says that "very many severity 1s have previously been reclassed as severity 2". I do not agree. I cannot recall any severity 1 defects being reclassified as severity 2. If there were any, it certainly was not "very many". If this happened it would have occurred at the morning UAT defect meetings, and would have been agreed by all parties. I attended these. As I do not recall it I do not believe it did happen.

68. In paragraph 43 of Brett Cowan's statement to the Commission, he refers to the "wholesale redefinition" of defects to achieve exit from UAT. I believe he is referring to the reclassification at the end of UAT 3. This was not relevant to Gate 1 Technical Cutover

paper criteria against which he has made this comment. This paper refers to the exit criteria for UAT 4. There was no severity redefinition that occurred during UAT 4 at any stage, other than agreed individual defects at the morning defect meetings at which all were present.

69. In paragraph 46 Mr Cowan refers to a Note for Project Directorate describing some defects raised during what looks like UAT 3. I have been shown a copy of that document. The points on page 1 are generic points relevant to any payroll. Most of the defects identified on page 2 relate to user documentation for payroll processing, rather than any system related issue. There are 5 issues relating to the system. I cannot now specifically comment on whether they were legitimate defects as I have insufficient information in respect of them. I can identify all were closed before Go Live and had no impact in production, as they are not in the Solution and Defect Management Plan.

70. The UAT Completion Report notes (at p.20) that data preparation and quality were a constant problem for UAT. I agree with this. A number of defects raised in UAT were found to be the result of poor quality data being used in UAT, and of the environment not having been set up correctly. This is likely to have been the cause of most of the short dumps or failures in the payrun execution which Mr Cowan referred to in his oral evidence. Again, defects due to poor data were not disaggregated in the UAT Completion Report (or elsewhere).

71. In the Conclusions section of the UAT Completion Report, the first row of the table contains some conclusions based on the statement that "It was very surprising to find so many functional defects in a system that was handed over as ready to go live". I do not agree that the conclusions drawn from this observation are correct or comprehensive. In paragraphs 58 to 61 of this statement I have already outlined reasons why this number of defects were raised in User Acceptance Testing, including the fact that many of the items raised were not true defects, or were the result of constant requirements changes. The system testing did include both boundary testing and negative testing and the coverage of the end-to-end test scenarios was comprehensive and based on the existing requirements.

72. The problems experienced by the QH UAT team during payroll processing were mostly caused, to the best of my recollection, by problems with the test environment in which they were running the payroll, which had been set up with inconsistent dates. This was not something that could be found or remedied through system and integration testing.

73. Regarding the fourth row of the Conclusions table, I agree that significant effort was required to support the business to define their requirements. This was a constant issue.

Report of Dr Manfield

74. At page 10 of the report between lines 25 to 30 Dr Manfield says that much testing was done and curtailed. I disagree with that comment in the event he is referring to system testing and SIT. The time for system testing and SIT were both extended to ensure all planned testing was completed. He also says that "not ready" software was delivered into various stages of testing. I also do not agree with that comment. The software was ready in the sense that it had passed comprehensive system testing. The requirements for the software however were changed regularly after that stage, which in turn led to a higher number of defects on average in the UAT process. This is different from saying that the software was not ready when delivered. A similar comment is made on page 6 at line 40 where he says that IBM was diligent but did not deliver into UAT a solution of sufficient quality. Again I do not agree with this.

75. In oral evidence Dr Manfield also expressed uncertainty as to whether the scope of the system testing undertaken was adequate. In response to this I also say:

a. the testing was comprehensive based on the requirements that were known at the time;

b. the testing was extended as required to ensure that all testing was completed and all major defects fixed;

c. the results were audited by QH and CorpTech staff;

d. I believe system testing and SIT were well performed.

POST "GO-LIVE"

General Comments on the Post "go-live" Support Period

76. In my role as project manager during the post-Go-Live phase, my general responsibilities included:

a. Execution of the Defect Management Plan;

b. Support for the payruns;

c. Fixing defects; and,

d. Implementing change requests.

77. Six weeks after the solution went live, CorpTech took over the role of general support for the system, but IBM remained responsible for correcting any defects under its warranty.

78. Also after "go-live" CorpTech continued to submit further change requests for us to do more work for them.

79. Ms Stewart, at paragraphs 42 and 43 of her statement, expresses concern that time was lost after go-live in addressing whether an identified issue was in fact a defect. IBM had a team that prepared each reported incident for an Impact Assessment, which included whether it was a defect, change request, user error or something else, and then estimated the effort required to address the issue. This is a fairly standard process for post "go-live" support. Given the warranty conditions, it was important to ascertain whether an incident that had been reported really was a defect. The consequences of an incorrect assessment could be very costly to IBM. Contrary to her suggestion at paragraph 41 of her statement, I do not recall IBM regularly asserting that issues raised were not defects or outside its responsibility after "go-live". However, after the Notice to Remedy and the Notice to Show cause were issued to IBM, as I outline below, IBM was compelled in practical terms to take a more careful approach to responding to requests from the State. I agree that during that period contractual interpretation issues did become a source of friction between the parties, but that was as a result of a decision of the State to issue contractual notices, not because it was IBM's preference.

80. In his statement to the Commission, Michael Walsh outlines a number of activities that were undertaken by the Payroll Stabilisation Program. Despite the abnormal circumstances, many of the activities outlined in his statement represent the kind of activities which are usual in the initial period after a new system goes live. Business process changes, performance tuning, and some defect fixes are regular post "go-live" activities on any major software release.

System Issues

81. I have been asked to comment on system issues and actions taken during the Post "go-live" period. I have focussed on the main items mentioned in the first three Post "go-live" QHIC Board Briefing Notes:

a. Workbrain Performance;

b. MVS Publishing;

c. Integration issues; and

d. Payroll processing overruns.

Workbrain Performance Issues

82. Initial reports of poor performance of the MVS were noted on 14 March 2010. IBM made some configuration changes to address the immediate issues that day. Further

performance issues occurred on 15 March 2010 and a high severity call was logged with Infor support on that day. I also escalated the matter to Infor's Australian Services Lead Julian Bird and the Brisbane Infor contact Scott Euston.

83. The problems being experienced by users as a result of the performance problems included:

a. slow performance when using Workbrain at peak times (usually when rosters were being prepared for publishing on MVS); and

b. users being timed out of the Workbrain application that is, the application froze and eventually the user was taken back to the Login screen.

84. IBM identified that some users were using aspects of the system incorrectly which was causing confusion and higher load. IBM sent out a hint sheet to help with MVS for this reason.

85. I also undertook a number of actions to provide additional skill, expertise and resourcing to address the issue:

a. I, together with my team, had been meeting on many nights with the Infor architects in Canada to help with analysis of the issues. I decided we needed these resources on the ground to assist with the technical analysis of Workbrain's interactions with Corptech's computer servers and Oracle database, where many of the problems appeared to lie. The Infor team arrived onsite in mid-April;

b. I brought in Mark Rafter, an Oracle database expert from IBM, to assist with analysing the Workbrain interactions with Corptech's Oracle database to see whether any tuning could be done here. He was engaged toward the end of March 2010;

c. I also brought in at this stage Murray Booth, an IBM Architect with expertise in the JVM operating software in place on Corptech's servers, to look at the server configuration and identify any problems;

d. I engaged Greg Greer from IBM as the Critical Situation Manager to co-ordinate all the performance analysis and resolution activity and report regularly back to myself and Corptech management. It was important to ensure there was co-ordination between all the various technical teams performing analysis and fix activities, the business users, and the management teams.

86. IBM, together with Corptech and Queensland Health, made a number of changes to the hardware, software and business processes being used in the period up to early May 2010.

87. These changes led to incremental improvements in performance that, by 7 May 2010, led to business feedback that the performance was much better. This feedback was contained in email correspondence received from Janette Jones, dated 7 May 2010 (see email). This was confirmed by the measurements that we were taking across the computer infrastructure and database. After this time, these issues were fixed and we moved on to monitoring mode, carefully keeping an eye on performance and continuing to tune as required.

MVS Publishing Issues

88. There were issues after "go-live" with some rosters where incorrect error messages were being received, meaning that sometimes rosters would not be published. Either the user was unaware of that error, or the roster was published but an error message appeared stating (incorrectly) that it had not been published.

89. IBM quickly (within a day) developed an Unpublished Roster Report as an immediate workaround so that the SSP could identify any rosters that had failed publication so they could be resubmitted. This report reduced the risk of payment impacts from this problem.

90. The causes of the major MVS publishing issues were identified and the resulting fixes were implemented on 26 April 2010.

Integration Issues

91. Some specific issues with the integration between Workbrain and SAP were identified in the first 6 weeks after "go-live". These were outlined in the PGL 2 and PGL 3 QHIC Board Briefing notes. Most of these occurred as a result of the large (much higher than expected) number of ad hoc payments being made each day as Queensland Health tried to work through its backlog of manual entry corrections. The PGL 3 briefing note summaries these as three issues, which I comment upon as follows:

    a. *First issue*: Out of sync, incorrect ad hoc payments. The first issue was that there was a higher than expected volume of interface summary errors. This issue was related to incorrect dates being used when SSP staff were using the ad hoc (Off Cycle) payment form. The project team made changes to the system to ensure incorrect dates could not be entered. The fix was tested and ready for release on 12 May 2010. It was released into production on 5 August 2010. The delay between testing and release to the best of my recollection was likely a result of the priority allocated to the issue by Queensland Health against the other issues which it asked to be addressed.

    b. *Second issue:* Duplication of file names for Off Cycle payruns. This issue resulted in one of the similarly named files not being processed, and was the result of files being

created, and therefore named, within the same second. The issue was fixed on 7 April 2010 by naming the file to the millisecond.

c. *Third issue*: Incorrect data being sent by Workbrain. I do not recall this specific issue and have not found any further records of it.

Payment Processing Overruns

92. The PGL briefing notes identified the length of time required to perform the SAP to Workbrain import interface job as an issue.

93. The larger than expected volumes of data being put into the system by Queensland Health staff, who were attempting to reduce their backlog and keep up with public commitments being made by Queensland Health management and the State Government, meant that some of the processing and reports associated with the running of the payroll took longer than estimated in the PPVT conducted prior to "go-live".

94. The Workbrain Employee import job, which passed across any changes made to employee records during the day, was taking longer than expected due to the average number of changes being made each day (2,000) being much greater than original estimates (300). The impact of this was that subsequent jobs started later, and could mean that nightly processing had not finished before users came in the next morning, stopping them from logging in straight away. Some early changes were made to mitigate this risk (such as starting the job earlier), and on 13 May 2010 a more permanent fix was implemented by splitting the file and running it in parallel, making its duration much quicker.

95. There were similar problems with some of the other processes and reports over the post "go-live" period, as data volumes remained higher than estimated. The project team gradually tuned each of these as time allowed, in order of priority, working with the Corptech team who were running the payroll.

96. I do not agree with the inference in Jane Stewart's statement at paragraph 118 that the review of the pay cycle processing and subsequent performance tuning opportunities began after handover to Corptech. This had commenced soon after "go-live" and had continued through the Extended Support Period and during the Warranty Support period. It is normal in systems implementations for this ongoing tuning to occur and it is no surprise to me that, after a couple of years, the processing runs more efficiently than it did just after "go-live". I would be surprised if it did not run more efficiently.

Other Issues

97. There were significant data quality issues which arose leading up to and after go-live.

98. For instance, there were thousands of employee records which were provided by Queensland Health (QHEST) to IBM which had data quality problems.

99. Some of the data quality problems are set out in QHEST document entitled "Go Live Data Transformation Report for Build 18 (08 Mar 2010)". Page 10 of that document identifies that there were 1,164 priority 1 and 18,624 priority 3 data migration issues, each of which "impacts employees' pay". In addition, p 19 of the document identified that 8,046 casual employees had no roster, but allocated that issue a "priority 5" (i.e. no action required to be taken).

The Role of non-system issues in the post "go-live" period

100. There were significant non-system issues that were impacting on our ability to support the QHIC solution and on perceptions of the solution, including that:

a. There was a backlog of some tens of thousands of updates which had to be entered into the (new) system before commencement of the first pay run (at the time of Go-Live). On 22 April 2010 following a meeting I had had with Jane Stewart, Philip Hood, Michael Kalimnios, Janette Jones and others I sent an email to Bill Doak summarising what had been discussed. Janette Jones had said at that meeting:

i. the prediction in the UAT Test Completion Report that there would be a large number of system errors post go live had proved to be wrong;

ii. QH SSP had a 40% backlog of manual adjustments at that point in time.

b. The process for obtaining and interpreting payroll data was not efficient. I understand that a large number of different types of handwritten timesheets would be sent from hospitals to the processing centre by fax. There was no standard timesheet format. I understand that there were also problems with the fax server, which resulted in timesheets not arriving at the relevant processing centre.

101. The majority of issues being phoned through by Queensland Health staff to the IBM team were not system defects and so did not end up being raised as system problems. If there were system defects found that were causing thousands of employees not to be paid, or were seriously miscalculating pay, these defects would have been raised as Severity 1 defects, widely circulated and resulted in senior management briefings explaining the specific defect and its resolution such that everyone would have known very clearly what had happened and how it was fixed. There were no such defects discovered or reported.

102. My understanding is that the majority of the under and overpayments were because adjustments to rosters were not able to be processed in the same period that they occurred and the adjustment had to occur in a later pay period. I believe this would be fairly normal in any major payroll but the number of these backlogged adjustments was

higher than normal in the period after "go-live". The higher number also meant a longer period until a payment record was fixed. I believe this was due to three main reasons:

a. the normal unfamiliarity of users with a new system in the first weeks after "go-live" resulted in slower processing;

b. the large backlog the SSP had when they went into "go-live" – they still had tens of thousands of changes to make from the old payroll system; and

c. the performance issues in Workbrain for a while after "go-live", which impacted the speed of data entry.

Issues raised in the statement of Michael Reid post "go-live"

103. I have read the statement of Michael Reid, who was the Director-General of Queensland Health between June 2008 and June 2011, and have the following comments in respect of paragraph 56 of his statement, which purports to give examples of problems and errors identified following Go-Live which had to be addressed as part of the Payroll Stabilisation Program.

104. Adopting the numbering of the sub-paragraphs of paragraph 56, I comment as follows:

a. *Higher Duties*

Mr Reid identifies a change as being required to address a manual workaround. This item is identified in the Defect Management Plan as prepared prior to "go-live". The item is number 2431 and is identified in both Appendix A (listing current known defects and changes prior to "go-live") and in Appendix B (as a new or changed requirement) (see page 4 of 8 of Appendix A and Appendix B at page 10 of that document). To the best of my recollection the change was agreed to be performed by IBM without the need for a formal change request to avoid delays in addressing the issue.

This item was in fact known about at least two months before "go-live";

b. *On-Call Allowance; and*

c. *Public Holidays, Not Required to Work*

These requirements were not part of the original scope of the interim solution. SOW 3 for the project "*Minor Enhancements to QHHR – ECC System*" (version 0.2 dated 7 July 2010) (**SOW 3**) (Exhibit 99) was raised against the HR Business Solution Software and Services agreement dated 30 November 2005 (**HRBS**) to implement four agreed 'enhancements' into production. Those enhancements included the items referred to at paragraphs 56(b) and (c) of Mr Reid's statement.

SOW 3 was signed by both Margaret Berenyi and Mal Grierson on 29 and 30 July 2010 respectively (as well as Kevin Killey for IBM). In signing off the statement of work they, in effect, acknowledged that these items amounted to a change in scope, and not a defect. This points to an acceptance of the fact that these issues had not been raised before "go-live".

For the "on call allowance" item the relevant enhancement was identified as "*2. SIMS 891 813 On-call for Senior Nurses*".

For the "public holidays, not required to work" item the relevant enhancement was identified as "*3. SIMS 863874 Pay rule 456518 added to 124 calculation groups*".

d. Public *Holidays, correct calculations*

I am not able to comment definitively on this item as an inadequate description is given. Mr Reid does not identify what the relevant holidays were, what employees were affected, or the defects that were raised. I am not aware of general or widespread issues with public holidays after "go-live".

I do recall that there were several occasions after "go-live" where Queensland Health advised of additional Show Days in regional areas, and they had to be added to the Workbrain calendar as public holidays. However, these were handled by CorpTech as a Work Request (ie maintenance), not by the project team as a defect.

There were two further items noted by Queensland Health for correction. These were:

i. an item (identified as defect 3174) which required a change to the pay calculation for Public Holidays for some nurses. This issue was only notified to the QHIC project team after "go-live". It arose from the then latest round of Enterprise Bargaining Agreements. To the best of my recollection a change request was not raised. The change was made to give effect to it quickly.

ii. to correct an issue which had been identified which meant staff entitled to a 4 hour minimum pay for work performed on a public holiday were not receiving that minimum entitlement.

Both items were addressed by 13 May 2010.

e. SAP *Reporting Impacts on System Performance*

I am not able to comment definitively on this item as an inadequate description is given. This item may refer to defects 2427 and 2451 which were known issues approved prior to "go-live" in the Defect Management Plan (see page 6 of the 'Defect/CR Spreadsheet as at Friday 12 March' (Appendix A)). These were described

as "*SAP_Nurses Exception Report Running for Long Time*" and "Change Reconciliation report to improve runtime" respectively. They were given a severity rating of "*3-Minor*", and did not directly impact employee payments. I believe they were both addressed by the end of May 2010.

f. Recreation *Leave Reversals*

I have not been able to identify any record of this issue. No specific defect number has been provided by Mr Reid.

g. *2009 / 2010 Payment Summaries*

This was a defect in the core SAP code provided directly from SAP (ie the project did not produce this code). It had no payment impact. The defect was found by the IBM test team and identified in the Test Completion Report dated 9 June 2010 (see defect 625 listed at Appendix B on page 16). It was noted that SAP would need to provide a fix before end of financial year processing began. I recall that SAP did this. The fix was implemented into production on 25 June 2010, before any production payment summaries were produced.

h. *Retrospective Payments*

This was another existing defect in the core SAP code which the IBM test team discovered and identified in the Test Completion Report (see defect 623 listed at Appendix B on page 16).

I recall that IBM worked with its offshore SAP team to make sure the problem was understood and addressed. The issue was fixed prior to the EOFY processing. This did not have any payment implications.

i. Workbrain *Schedule Compliance Errors*

The only issue I have been able to identify of this nature is defect number 838238. This was fixed on 16 March 2010. This issue did not impact payments.

j. Roster *Load Form (RLF), Workbrain*

I recall that this was working as designed and had been tested, but the Queensland Health users subsequently decided they did not want meal breaks added automatically. Consequently, a useability change was made by the project team to stop the automatic addition of meal breaks. This was therefore not a defect, and had no payment impact.

This item is identified at page 20 of the Functional Specification (Enhancement) (version 0.3) deliverable (Exhibit 100). That document states that the automatic meal

break would be inserted for any shifts that were a minimum of 6 hours in duration. That deliverable was accepted on 3 November 2008 by Mike Robinson, as evidenced by the deliverable acceptance sheet for that document (also part of Exhibit 100).

k. *Selection* of *Roster dates in Workbrain before 8 March 2010*

To the best of my recollection, this issue arose due to an incorrect date entered into the Workbrain production configuration, which was not found in earlier testing because it was specific to the production environment. It was quickly fixed and did not impact payment.

l. Roster *Publishing Errors*

I recall that this defect was identified and fixed after "go-live" (by a "hot fix", I believe around 24 April 2010). It had not occurred in either system test or SIT (this may have been due to lower volumes of published rosters in test than production). This error did not impact payment.

m. *Leave* Processing *in Workbrain*

To the best of my recollection, this was working as designed, and was not a defect. There was a lot of processing required to complete the leave request in the background. However, I believe the earlier check (ie error message) was later added to assist useability. It did not impact payment.

105. More generally, with respect to paragraph 57 of Mr Reid's statement:

a. the "problems/errors" were, as set out above, not unexpected system defects;

b. none of the "problems/errors" listed in paragraph 56 were "fundamental" problems in the system; and

c. in any case, the "problems/errors" did not have any significant effect on payments to Queensland Health employees.

106. I understand that the 'defects' identified in paragraph 56 of Mr Reid's statement were some of those listed in a document entitled "*Queensland Health payroll system problems identified after go-live*" which is Exhibit 93. I have also been asked to comment on other 'problems' identified in that document. I comment on some of these below:

a. Annual *Leave Central Scheme (ALCS) Report: Incorrect calculations were occurring for accruals of ALCS entitlements.*

This was not impacting employees' leave balances, but required manual adjustments for Treasury reporting. A fix was required so that reporting to

Treasury was accurate. This was, I believe Defect 2425 on the Defects Management Plan.

b. *End of Financial Year Compliance: Change required to ensure the signatory on payment summaries is correct; change required to remove information about non tax deductible donations from payment summaries; and changes required because several wage types that are part of gross earnings were appearing in the wrong section of payment summaries.*

The changes identified were not a defect. They were what CorpTech deemed 'Service Requests', (that is, standard maintenance changes that need to be done to customise the Payment Summaries for Queensland Health). For example, the standard payment summary from SAP needs to be updated with the appropriate current signatory of the organisation which is using it. CorpTech made these changes themselves because the QHIC project team was only responsible for defect fixes, not standard service requests like these.

A specific example of such a change being requested is evidenced by the Service Request form 'rfc-a3402' for the wage type change referred to above. It is clearly identified in this document that the "*Change Type*" is "*Maintenance*", not "*Defect Rectification*".

c. *DSS Key Reporting Tool: As the new system could not produce an accurate employee list for each work unit, Qld Health's Decision Support System (DSS) was identified as a potential information delivery tool to line managers.*

I do not recall any issue being raised with the solution being unable to provide employee lists, though I believe this may be a reference to Defect 2477, which was handled under the Defects Management Plan.

d. *Temporary Employees, System Details: A fix was required to ensure that details held in both SAP and Workbrain match so that accurate payments can be made. On occasions, this information was inconsistent.*

I refer to this issue at paragraph 91(a) above.

e. *"Loan" on Payslips: The word "loan" was appearing on payslips, was causing confusion for staff as there had not been sufficient education regarding the new payslips. As this text was unclear, it was changed to "Overpaid Wages" to make it easier to understand.*

Again, this was an enhancement effected by SOW 3, not a defect (as with those items referred to by Mr Reid at paragraphs 56(b) and (c) of his statement). The relevant

enhancement was identified as "*1. SIMS 888811/881798 Identification of when a loan value is due to an Overpayment on the Payslip*". This is was not a defect.

f. *Ad Hoc Payments Report: This report was being manually generated by payroll staff on a daily basis. A fix was applied to enable the report to run automatically, and be emailed directly to payroll staff.*

My recollection is that the manual generation was normal processing and to assist payroll staff the support team provided the automatic email function. This was implemented on 7 July.

g. *Remserv: When an employee ceased employment the process of refunding money sitting in their RemServe account was a manual process. A change was applied to automate and simplify this process. This improves the accuracy and timeliness of refunds.*

To the best of my recollection this was an enhancement to the system which IBM had agreed to build, rather than the fixing of a defect. It is possible that this may also be a reference to Defect 2561 (with Workaround 138) which was dealt with in the Defects Management Plan.

h. *Leave processing: The leave request functionality in WorkBrain needed to be updated to automatically transfer leave to the Timesheet, Roster Load Form and Multi-view scheduler in a timely manner. This was required to improve the performance of leave processing.*

I believe this may be a reference to Defect 730, which was dealt with on the Defects Management Plan.

Signed: 

Date: 4/6/13

Witness: 
Nicola Kent