UKLP Go-Live Readiness

A CSA review of Xoserve's GONG G2 submission

Client   Xoserve
Date: March 2017

Contents

Executive Summary

Context

▶ GONG G2 marks the second of three assessment points that build towards a Go/No-Go decision for Project Nexus on the 19th May 2017

▶ In order to assess progress towards the final milestone at each of these points, a set of Industry wide assessment criteria has been formed by Ofgem. Xoserve have submitted a status against these criteria at each GONG Gate

▶ Xoserve originally baselined a set of more detailed Internal GONG criteria in June 2015, and have maintained these criteria, and a status against them since this point. These internal criteria have been mapped to the Industry criteria to provide a consistent view of readiness

▶ Ofgem have requested that Baringa provide commentary against Xoserve's readiness and validate the level of risk that Project Nexus is carrying towards Go Live.

Scope

▶ Presented upon completion of G2 milestone, this assessment reports on whether GONG associated activities have been completed as expected for G2 and provides an updated position on any risks to the Final Go Live Decision that exist, with associated mitigating actions. In addition, this report makes a recommendation on whether Xoserve are on track to achieve Go-Live. The following specific questions are to be answered:

1. Have Xoserve achieved their own internal go live readiness criteria?
2. Have Xoserve demonstrated that they have achieved the GONG criteria associated with Success Factor 1 - Solution Meets Industry Requirements?
3. Have Xoserve demonstrated that they have achieved the GONG criteria associated with Success Factor 2 - Solution is Stable?
4. Have Xoserve demonstrated that they have achieved the GONG criteria associated with Success Factor 3 - Solution is sustainable?
5. Have Xoserve demonstrated that they have achieved the GONG criteria associated with Success Factor 4 - Solution Enables a Positive Consumer Experience?
6. Have Xoserve implemented lessons learned and appropriate controls as a result of previous Data breaches?

▶ The above analysis contributes to an overall conclusion on whether Xoserve are ready to proceed through the Assessment point and continue towards go live.

Executive Summary

Baringa

▶ Baringa have been embedded within Xoserve's GONG management process since its inception in 2015

▶ Baringa's assessment of risk has been established based on our involvement in this process, and a detailed review of the data submitted against each GONG criteria

▶ Where required, additional deep dive reviews of supporting documentation, or workstream activity, have been performed to support the assessment of risk. This however has not been performed across all criteria, only those where the perceived risk profile requires it.

Conclusions

▶ In conclusion, Baringa supports the headline GONG criteria status, and associated risk profile as submitted by Xoserve, and support moving through the Gate 2 towards Go Live

▶ There are however some low level GONG criteria for which Baringa believe the status is currently stated too positively, and these have been highlighted by exception within this report

▶ Xoserve must be mindful of the number of risks that are beginning to build across each of the 4 areas of Industry assessment criteria. Whilst none of these risks are currently significant enough to jeopardise Go Live, Xoserve must avoid a 'death by a thousand cuts' scenario, especially given the reducing timeframe to mitigate such risks

▶ Baringa recognise that there are a significant number of mitigating actions in place and when combined with recommendations highlighted within this report, a Go-Live status of Green / Amber is forecast

▶ Key interventions are required in the following areas ahead of GONG3:

  ▶ **Meet Industry Requirements** – Employment of Xoserve's regression test suite, clarity on defect deployment schedules & clarified approach for Data Migration defect root cause analysis & prioritisation

  ▶ **Solution Stability** – Confirmation of workaround sustainability, and close out of non functional requirement traceability

  ▶ **Solution Sustainability** – Finalise PIS organisation structure, bolster team to improve Local Work Instruction delivery and provide further detail on the enduring Industry release plans & governance models

  ▶ **Impacts to Consumer** – Define detailed handoffs/interaction points across all new PIS teams within the Incident Management Process

▶ Baringa also recommend that greater Xoserve Programme focus on the GONG process is required. Workstreams have struggled to consistently prioritise GONG management activities against wider workstream delivery responsibilities. Reinforcement of accountabilities by Programme management is required.

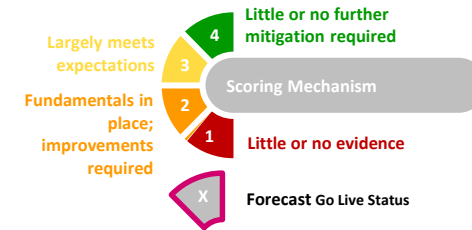# Question 1 - Have Xoserve achieved their internal Go live readiness criteria?

▶ Summary findings documented below are based on a review of ongoing GONG management processes and Xoserve GONG status as submitted for Gate 2 on 16th March 2017.

Sub-Question	RAG 24/03	Current Findings	Recommendation	F'cast GL RAG

Status against each internally defined criteria (presented at a rolled up GONG category level) and the associated risk to Xoserve's ability to go live and the potential impact on Market Participants.		**See Appendix A.1 – Summary Dashboard of Xoserve GNG Criteria**
		• 218 internal criteria have been defined
		• G2 Status is: 44 complete, 148 Green, 19 Amber, 7 Red
		• Evidence has been uploaded for 14 of the 44 complete items
		• Red items are related to Archiving, Low level Day 1 operational design gaps, Reporting and Benefits
		• Baringa believe that a number of additional GONG criteria should also be marked as Amber – These relate to:
		  • Management Information – Risk of silo'd MI design
		  • Exceptions – Detailed ways of working/inter team dependencies need clarifying
		  • Facilities & Assets – Formal approach for Xoserve team logistics not yet published
		• No further criteria are judged to be RED status
			• Xoserve's GONG working group to take focused action on closing Red gaps by GONG G3
			• Programme priority action required to upload evidence and complete business acceptor sign off for completed items
			• Appoint a Reporting/MI manager to validate readiness for Go Live
			• Resolve Exceptions operational dependencies alongside wider PIS operations
			• Confirm approach for Day 1 logistics	

The effectiveness of the internal go live decision making process and governance.		**See Appendix A.2.1 – 2.2** • A detailed approach and plan is in place, and has been aligned to the Industry Day by Day Governance plan • Governance ToRs have been defined • Working groups, Business Acceptors and Exec Sponsors are aware of their accountabilities	• Confirmation of the final decision meeting format is still needed, including definition of the confirmed report templates • Schedule a formal dress rehearsal	
How the Xoserve internal go live readiness criteria maps to the industry GONG framework highlighting any areas of misalignment.		**See Appendix A2.3 - Summary of the mapping process & Breakdown of the mapping** No areas of misalignment - Criteria are fully mapped to external criteria All required Industry evidence has been added to internal criteria tracking	• N/A	

GONG G2 Summary Position

Baringa

- Baringa assess Xoserve's GONG G2 status as AMBER and forecast a status of GREEN/AMBER for Go-Live on the basis that the Programme continue to hit plan milestones and key risk mitigations are put in place ahead of G3
- There are not judged to be any showstopper issues that would prevent Go Live at this stage however an overall build up of risk is noted
- Data Migration is still a key risk area within the GONG criteria with defects needing rapid triage and resolution within IDR timelines (dependent on source)
- Wider key risk areas sit within the Sustainability category which is reflective of a natural Programme focus on delivery through to Market Trials, and a refocus on operational readiness in 2016
- *The below RAG scoring and commentary is a summary of an assessment against a series of specific questions posed by Ofgem. Detailed questions and responses are covered on slides 7-13.*

Scoring Mechanism

- 4 — Little or no further mitigation required
- 3 — Largely meets expectations
- 2 — Fundamentals in place; improvements required
- 1 — Little or no evidence
- X — Forecast Go Live Status

Success Factor 1 - Solution meets industry requirements

Findings

- ✓ A stable MT Regression Test has indicated that the core solution meets Industry requirements
- ✓ A relatively low number of functional defects exists (at 15/3 - 26 P2 and 60 P3 of which 18 are industry raised), and work around process is in operation to protect the core solution
- ✗ Data defects still exist and require closure through the remaining IDR data cycles

Recommendations

- ▶ A confirmed delivery plan is required for remaining functional defects
- ▶ Employ agreed regression test suite and publish outputs for any further functional changes post MTR
- ▶ Finalize Post Go-live deployment schedule
- ▶ Data Defect RCAs required for recurring issues.

Success Factor 2 - Solution is stable

Findings

- ✓ Non functional testing is largely complete with residual DR and Penetration Testing scheduled
- ✓ Code stability maintained over the course of MT Regression test
- ✓ Low Level Cutover Plan (LLCP) rebaselined for IDR2 with a need to refine for IDR3
- ✗ Data Acceptance Criteria need adapting to wider data sources to better understand defect materiality

Recommendations

- ▶ Residual action required to close out NFR traceability & assess the need for BW report performance optimisation
- ▶ Complete a holistic operational impact assessment of the workarounds incurred by maintaining code stability
- ▶ Publish LLCP updates ahead of IDR3
- ▶ Prioritise defects for fixing based on impact - Identifying 'do not fix' candidate data defects.

Success Factor 3 - Solution is sustainable

Findings

- ✓ Training / Knowledge transfer progresses to plan
- ✗ Design docs not yet fully updated however not judged to be GL critical
- ✗ Local Work Instruction development progress has been slow
- ✗ Further definition of post Go Live change & release governance is required
- ✗ The maturity of the PIS structure and detailed processes represent an area of risk on Xoserve's readiness for Go Live

Recommendations

- ▶ Plan and prioritise design doc updates
- ▶ Continued mgmt. support and resource to bolster LWI creation
- ▶ Confirm timelines for publication of wider approach and plan for PIS release content
- ▶ Finalise PIS organisation structure and impact assess on processes defined

Success Factor 4 - Solution enables a positive consumer experience

Findings

- ✓ Market Trials Info. Library maintained
- ✗ More clarity required on detailed handoffs/interaction points across all new PIS teams within the Incident Management Process
- ✓ PIS exit criteria have been drafted and are currently in review
- ✓ Day 1 FOM in place and Xoserve people transition agreed for all teams
- ✗ Management Information has been developed in Workstream silos

Recommendations

- ▶ Comprehensive comms approach required for Incident management and PIS Exit criteria
- ▶ Greater clarity on R&R/ways of working across Xoserve & Wipro/TCS teams required in PIS structure for incident triage/impact/issue mgmt.
- ▶ Appoint a MI manager to validate readiness for Go Live

Question 2 - Have Xoserve demonstrated that they have achieved the GONG criteria associated with Success Factor 1 - Solution Meets Industry Requirements?

▶ Summary findings documented below are based on a review of ongoing GONG management processes and Xoserve GONG status as submitted for Gate 2 on 16th March 2017.

Sub-Question	RAG 24/03	Current Findings	Recommendation	F'cast GL RAG
a) Whether the data requirements and the approach to data migration has been documented, reviewed and updated where appropriate.		• Data migration approach baselined • Source to Target documents created yet not rigorously maintained which has led to testing inefficiencies	• Continue to focus on Data defects rather than shift focus to retrospective document updates	
b) The final position on Data transformation rules and confirmation that they have been communicated to all Market Participants.		• All externally impacting T-Rules agreed via Ind. Govn. • T-Rule details available on Xoserve.com	• Assess potential need for fallback rules where data cleanse is likely to be outstanding at go-live	
c) The final bulk and the applicable delta data load for each assessment has demonstrated that data has loaded and produced an acceptable volume of fall out MPRN's which has been assessed by the relevant Market Participants.		• Bulk 2 complete with zero defects • As at 21/03 there are 70 Open Delta defects (27 P1/P2) – analysis ongoing to confirm validity and a number are expected to close with no action • 32 of 70 have had a fix applied and are awaiting subsequent ETL for final validation	• Utilise data acceptance criteria to prioritise defect fixes inc. identifying 'do not fix' candidates • Address root causes and required data fixes to avoid reoccurences in subsequent migrations	
d) Whether Xoserve have demonstrated that they have achieved the applicable Market Trials exit criteria and have completed all internal functional testing.		• Market Trials Exit approved via PNSG with caveats • UAT complete (aside from CRs) • HPQC reconciliation exercise in progress to finalise status across all test cases within the testing tool • 18 'live' CRs (undergoing IA or in delivery). Those with system impacts which are progressed into delivery will require further internal testing	• Finalise UAT closure report in order to formally capture residual risk items/actions	

Question 2 - Have Xoserve demonstrated that they have achieved the GONG criteria associated with Success Factor 1 - Solution Meets Industry Requirements? (Continued)

► Summary findings documented below are based on a review of ongoing GONG management processes and Xoserve GONG status as submitted for Gate 2 on 16th March 2017.

Sub-Question	RAG 24/03	Current Findings	Recommendation	F'cast GL RAG
e) The final defect position evaluating the volume and impact of all internal defects that remain open as well as the proposed fix plan post go live.		• All defects are being reported via establish industry process • As at 15/03 86 defects remain open (26 P2 and 60 P3 of which 18 are industry raised)) • 19 defects are undergoing workaround development and may, following analysis of workaround feasibility, require a fix • Definitive fix plan for all 'to be fixed' defects is pending • PGL defect pot prioritised with industry input but detailed deployment schedule is pending	• Complete any residual communications of Regression approach to Industry stakeholders • Employ agreed regression test suite and publish outputs for any further functional changes post MTR • Finalise PGL deployment schedule (albeit detailed deployment dates will be dependent on post go-live stability)	
f) The extent of manual activity/ workarounds that will be maintained post go live and whether the resources and processes to support them are in place		• 22 defects have been closed pending the agreement of manual workaround • FTE impacts of defect workarounds estimated (pending CSA review of methodology) and anticipated to be at manageable levels • 21 deferred CRs are confirmed as needing workarounds and 11 are undergoing assessment – FTE impacts yet to be quantified	• Central tracking of workaround delivery (CR and defect) and holistic assessment of Day 1 Ops impacts • Appoint a Workaround Manager to oversee the end to end delivery cycle for all workarounds and clarity of upward reporting	
g) The final requirements traceability matrix to determine whether a clear mapping exists between requirements, design and test cases so that it can be demonstrated that all requirements have been completely tested.		• Source Rule coverage mapped within Programme's traceability toolset • Change Request impacts on SR coverage assessed as part of the CR process	• Continued assessment of CR impacts on SRs and subsequent traceability linkages	

Question 3 - Have Xoserve demonstrated that they have achieved the GONG criteria associated with Success Factor 2 - Solution is Stable?

► Summary findings documented below are based on a review of ongoing GONG management processes and Xoserve GONG status as submitted for Gate 2 on 16th March 2017.

Sub-Question	RAG 24/03	Current Findings	Recommendation	F'cast GL RAG
a) Whether Xoserve have demonstrated that they have achieved the applicable exit criteria and have completed all internal non-functional testing. For example (but, not limited to): PT, Gas Day Testing, Volume Testing, Large File Testing, Security Testing		• Non functional Requirement traceability is 80% complete (Evidence mapped to Req.) • Performance Test and Gas Day Testing is now complete with Exit reports reviewed (Inc. vol. testing) • 2 rounds of Penetration testing successfully complete – A final round is planned 31/03 to validate that recommendations have been completed • DR4 scheduled to complete 09/04	• Assess the need for BW report performance optimisation – this should be prioritised based on report criticality, with analysis in flight • Meter Read volume risk persists and formal acceptance of risk required by PNSG • Complete NFR traceability & perform content assurance review	
b) Whether Xoserve have appropriately maintained their Nexus Solution and maintained code stability between the completion of MT Regression and go-live. This includes: • How any Nexus change requests have been impact assessed and implemented between MT Regression and go-live should they be required. • The approach for impact assessing any business as usual changes, SAP upgrades (service packs or patches), projects or production 'fixes' (incident management) and, if required, how they will be deployed; • How internal regression will be managed prior to and go-live. • The outcome of any SAP Go Live readiness assessment and the status of any associated recommendations		• As per Baringa's CSA Code Stability report presented at PNSG on 22/03, Baringa are comfortable that the level of code stability reached supports MT Regression test exit – **See Appendix B** • A Regression Test suite has been developed however is yet to be fully operationalised and therefore not employed throughout MTR • Approval in principle has been given to any essential code fixes required during IDRs • SAP Go Live readiness checks undertaken and recommendations under review	• Establish a granular fix plan for all 'to be fixed' defects • FTE impacts need to be quantified for total pot of workarounds • Near term release approach and plans need to be consulted on with Industry	

Question 3 - Have Xoserve demonstrated that they have achieved the GONG criteria associated with Success Factor 2 - Solution is Stable? (Continued)

Baringa

▶ Summary findings documented below are based on a review of ongoing GONG management processes and Xoserve GONG status as submitted for Gate 2 on 16th March 2017.

Sub-Question	RAG 24/03	Current Findings	Recommendation	F'cast GL RAG
c) Xoserve's post go-live business continuity and IT disaster recovery procedures and whether they have been appropriately tested.		• 3 rounds of Disaster recovery & failover testing has been completed to date. Given 12 months has passed since DR3 with a number of infrastructure and application changes made, a DR4 was judged advisable with the aim of testing: • End to end failover timings on the Production env. • Residual functional testing post failover • Xoserve's existing 22 BCM scenarios have been updated for new UK Link. These are owned by Xoserve internal audit and tested on an annual basis. No specific further testing is currently planned ahead of Go Live. • Business readiness testing has provided valuable scenario testing of a variety of business and technical failures	• DR4 scheduled to complete by 09/04 – With a clear mitigation plan published for any residual risks identified • BCM scenarios should be updated as required to align with 'contingency scenarios' defined via TPG • Baringa to perform a sample review of the BCM scenario updates • Baringa propose investigating if there are any prioritised BCM scenarios that could be tested ahead of Go Live to provide additional confidence.	
d) Xoserve have documented a detailed system cutover plan that has been approved and successfully rehearsed in IDR 2 and IDR 3.		• LLCP rebaselined ahead of IDR2 • Baringa identified key risks around the ability to replan for IDR3 based on IDR2 lessons learned • Data migration (defects) still represents the key risk to IDR2 success with Delta defects still being encountered	• Continued RCA, profiling and prioritised fix of Data migration defects • Publication of a summary of changes to LLCP post IDR2	
e) The materiality of unresolved Data migration defects.		• Acceptance criteria utilised to assess defect materiality with profiling input from the Auto Validation tool but only fully applied to Bulk, Delta and iGT data sources • Open data defects @21/03 for wider data sources: • iGT: 40 • US: 32 • Custom Objects: 23 • Data Acceptance Criteria need adapting to wider data sources to better understand defect materiality	• Maximise additional test cycles for sources where the production need date is cutover • A consistent defect prioritisation mechanism needed for wider data sources • Defect RCAs required for recurring issues • Defect analysis must identify 'do not fix' candidates to ensure fix efforts are prioritised	

Question 4 - Have Xoserve demonstrated that they have achieved the GONG criteria associated with Success Factor 3 - Solution is sustainable?

▶ Summary findings documented below are based on a review of ongoing GONG management processes and Xoserve GONG status as submitted for Gate 2 on 16th March 2017.

Sub-Question	RAG 24/03	Current Findings	Recommendation	F'cast GL RAG
a) The completeness of the Design documentation specifically covering how the critical industry processes will operate.		• Business Process Design Documents and Functional spec.'s exist for all business processes • Changes in design due to CR/defects may not yet have been reflected • Update schedule is currently behind plan but not judged to be Go-Live critical	• Revise document update plan, prioritizing critical processes for prior to Go Live.	
b) The end-to-end process guides and documents confirming that they have been updated and are available to the Market Participants as required.		• LWIs update & workarounds being managed however progress slow due to business resource availability • Workarounds with external impacts have been defined and approved via industry governance	• Reinforce central Business change workstream control over LWI production • Prioritise SME time for LWI work to mitigate against plan slippages	
c) Completeness of the Knowledge transfer activity from Programme to key operational teams (key users) and IT Support teams.		• Training Needs Analysis complete • System training scheduled all users • System based training in progress • Reliance on wider KT led by ops teams • Little central assurance on quality of KT Reliance of LWI's currently behind plan	• Closure central management of KT activities • KT success to be tracked at team level pro-actively similar to formal systems training	
d) The Post go-live release plan and change management processes address immediate post go-live fixes (across industry processes, where applicable).		• PGL Release Approach has been defined and articulates a HL plan to drop minor releases (for fixes) during the PIS period. • A Future Release stream has also been initiated to define the longer term approach, delivery methodology and plans for post-Stabilisation. This encompasses planned major releases of functionality.	• Confirm timelines for publication of wider approach and plan for PIS release content • Provide next level of detail on actions expected from Industry participants – E.g. Regression testing	

Question 4 - Have Xoserve demonstrated that they have achieved the GONG criteria associated with Success Factor 3 - Solution is sustainable? (Continued)

▶ Summary findings documented below are based on a review of ongoing GONG management processes and Xoserve GONG status as submitted for Gate 2 on 16th March 2017.

Sub-Question	RAG 24/03	Current Findings	Recommendation	F'cast GL RAG
e) The suitability of ongoing data governance processes confirming that they have been defined and are operational.		• Initially Data management group will persist • Ongoing data governance to be fully defined as part of future Industry governance definition • Intentions exist to leverage R1 governance processes wherever suitable.	• Xoserve to publish a transition plan for Industry Governance fora, including relevant data management forum, and including how fall out will be managed to close down.	
f) The cutover and post go-live governance to determine if it provides an appropriate framework to support decision making in the event of an issue at go-live and during the Hypercare period.		• Governance processes for cutover are expected to replicate IDR2 and 3. The process has not yet been tested to the full extent during IDR 2. • The governance processes for PIS and Stabilisation are still in process of being defined • Current future Industry Governance proposals include both an Issue Resolution Steering Group and Hypercare Service Delivery Forum, led by Xoserve, and part of the overall SD&O group. This model is still being refined and only exists as a proposed set of ToRs. These new groups are due to start assuming responsibilities from RIAG and PNDG respectively from May 2017.	• Xoserve to complete their accepted IDR2 entry action to test governance enactment during an IDR (Proposed by Xoserve for IDR3) • Xoserve to provide a forward looking communications plan for sharing details of to-be industry governance model • Industry participants, supported by central Project Nexus Governance, must minimise activity that introduces variance to planned cutover activity E.g. CoS peaks / early cutover.	
g) The Post go-live / Hypercare IT support processes to determine whether the resources are available and arrangements are in place and understood.		• The maturity of the PIS structure and detailed processes represent an area of risk on Xoserve's readiness for Go Live • The top level PIS structure is under review and may drive changes in lower level proposed processes • A lack of clarity of roles and responsibilities at a granular level e.g. Process handoffs, has been highlighted within Business Readiness Testing (BRT).	• Finalise PIS organisation structure and impact assess on processes defined • Complete actions/gaps raised by BRT • Ensure alignment of PIS support with longer term (return to BAU) governance plan development.	

Question 5 - Have Xoserve demonstrated that they have achieved the GONG criteria associated with Success Factor 4 - Solution Enables a Positive Consumer Experience?

► Summary findings documented below are based on a review of ongoing GONG management processes and Xoserve GONG status as submitted for Gate 2 on 16th March 2017.

Sub-Question	RAG 24/03	Current Findings	Recommendation	F'cast GL RAG
a) Whether Appropriate FAQs and messages have been captured and disseminated to appropriate internal and external stakeholders. This may include messages to key customers around Non-effective days.		• Market Trials Information Library maintained to provide Market Participants with key business process details • Lack of clarity of Internal/External Comms process in event of incidents during PIS	• Comprehensive comms approach required detailing roles and responsibilities, handoffs, channels of communication and escalation points within PIS/Command Centre	
b) The Hypercare exit criteria and the degree to which they will support a controlled exit from Hypercare and are focused on system stability.		• PIS exit criteria have been drafted and are currently in review with Programme and Xoserve operational stakeholders • Post Go live Industry governance and planning is underway	• Conduct a CSA review of the baselined criteria • Xoserve should continue developing its plan for Industry governance Post Go Live, making Industry engagement activities clear.	
c) The readiness of the new Organisational structure.		• Day 1 FOM in place and Xoserve people transition agreed for all teams • Greater clarity on R&R/ways of working across Xoserve & Wipro/TCS teams required in PIS structure for incident triage/impact/issue mgt • Management Information has been developed in Workstream silos with limited cross business validation	• Detailed ways of working between teams to be clarified further and tested. • Ensure Xoserve & Wipro/TCS SMEs are embedded across PIS teams structures (Technical and Business) to drive quick/right 1st time decisions. • Appoint a Reporting/MI manager to validate readiness for Go Live & Perform gap analysis against Business req.'s.	
d) Business readiness activity focused on the People impacted by changes by the Project Nexus go-live have received appropriate training.		• Training Needs Analysis complete • 34 training courses designed • System training scheduled all users • System based training in progress • There is an inherent risk that Training materials may be inaccurate/ incomplete due to design changes/ workarounds not being clearly cascaded	• Transparency by Wipro of any design changes (non CR based) • Tight mgt & timely notification to training of any workarounds agreed requiring training.	

Question 6 - Have Xoserve implemented lessons learned and appropriate controls as a result of previous Data breaches?

Baringa

Context: Market Trials Level 3 Data Breach Incident Summaries

Incident: #8617 April 16 – Batcher Issue

Scale of Impact: 23 Organisations impacted

Root Cause:
- Erroneous configuration parameter set manually within MT environment without governance approval
- Pretesting was only a point test (not E2E) and therefore failed to identify the issue

Mitigations applied:
- Reinforcement of Release Deployment Board (RDB) control point to govern any change impacting an externally facing environment
- Environment comparison checks ahead of deployments
- Strengthening pre-test requirements to include fuller regression and E2E testing

Incident: #540998 June 16 – AML

Scale of Impact: 5 shippers received AMLs containing (non commercially sensitive) data pertaining to other organisations

Root Cause:
- Human error during a manual step within AML generation process
- Manual step only necessary in MT environment due to integration limitations

Mitigations applied:
- System change introduced within the MT environment to replace manual steps within the AML creation with an automated solution

Incident: #12829 December 16 – CDR issue

Scale of Impact: CDR file issued to one participant containing data related to four others

Root Cause:
- Human error occurred during the manual execution of the batcher undertaken as a 'catch up' activity following defect resolution

Mitigations applied:
- Process leads to validate reprocessing requests and review test evidence
- Adhoc batcher requests to be initiated via Control M (removes manual input of parameters)
- Any unavoidable manual processes to utilise 'buddy' sign off
- Risk and Compliance engaged to advise on future control mechanisms

What is Baringa's assessment of the risk that this poses to Go Live and Post implementation support activities, from an Industry Data security perspective?

- Whilst the risk of data breach cannot be completely removed, Xoserve has taken tangible steps to understand root causes of issues and embed mitigations to reduce the likelihood of similar future incidents. It's noteworthy that no such incidents have occurred during MT Regression
- A common underlying cause of the issues encountered has been human errors occurring during manual activities
- There will be a lesser reliance on such manual interventions within the live environment as compared with MT (full integration across components, functional testing complete) and therefore a reduced risk of human error
- Early productionisation of Service Management tooling (early April) will also further improve the robustness of controls around key environments.

What are the proposed mitigating activities that should be implemented prior to go live to reduce this risk?

- Ensure data protection/compliance roles & responsibilities and processes within the PIS structure are fully defined including interlinks with existing IS Ops and Risk & Compliance control and governance processes
- Consider the appropriate juncture to transition from project change control to the production equivalent, balancing the need for speed of decision making and heightened governance
- Risk & Compliance audit of key LWIs / Manual Workarounds to assess data compliance risks and options for mitigation.

Conclusions

▶ In conclusion, Baringa supports the headline GONG criteria status, and associated risk profile as submitted by Xoserve, and support moving through the GONG 2 towards Go Live

▶ There are however some low level GONG criteria for which Baringa believe the status is currently stated too positively, and these have been highlighted by exception within this report

▶ Xoserve must be mindful of the number of risks that are beginning to build across each of the 4 areas of Industry assessment criteria. Whilst none of these risks are currently significant enough to jeopardise Go Live, Xoserve must avoid a 'death by a thousand cuts' scenario, especially given the reducing timeframe to mitigate such risks

▶ Baringa recognise that there are a significant number of mitigating actions in place and when combined with recommendations highlighted within this report, a Go-Live status of Green / Amber is forecast

▶ Key interventions are required in the following areas ahead of GONG Gate 3:

   ▶ **Meet Industry Requirements** – Employment of Xoserve's regression test suite, clarity on defect deployment schedules & clarified approach for Data Migration defect root cause analysis & prioritisation

   ▶ **Solution Stability** – Confirmation of workaround sustainability, and close out of non functional requirement traceability

   ▶ **Solution Sustainability** – Finalise PIS organisation structure, bolster team to improve Local Work Instruction delivery and provide further detail on the enduring Industry governance models

   ▶ **Impacts to Consumer** – Define detailed handoffs/interaction points across all new PIS teams within the Incident Management Process

▶ Baringa also recommend that greater Xoserve Programme focus on the GONG process is required. Workstreams have struggled to consistently prioritise GONG management activities against wider workstream delivery responsibilities. Reinforcement of accountabilities by Programme management is required.

Appendix A

Supporting information for Question 1

A.1.1 Internal GONG Criteria Comparison (16/03/2017)

Baringa

The table below summarises the current Xoserve internal GONG criteria status and compares it to a Baringa assessment across the same criteria:

Prog. RAG *	A. Solution, System and Data		B. Business Readiness											C. Transition Readiness					D. Industry Readiness			E. Other				
	G		G											G					G			G				
	A.1	A2	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	C.1	C.2	C.3	C.2	C.3	D.1	D.2	D.4	E.1	E.2	E.3	E.4	E.5
	Solution Integrity	Delivery pre requisites	Leadership	Governance	Ways of Working	Process	Structure	Capability (including Training, Engagement and Comms)	Management Information	Performance Management	Service Management	Exceptions	Business Benefits	Transition and Cutover	Facilities & Assets	Post Implementation Support	BAU Operations	Go Live Controls	Comms and Training	Data Cleanse	Transition	Accreditation	Reporting	Licences	Contracts	SAP Findings
	G	G	G	G	A	G	G	G	R	G	G	G	R	G	G	G	G	G	G	G	G	G	G	G	G	G
CSA RAG	G	A	G	G	A	A	G	G	A	G	G	A	R	A	A	A	G	G	G	G	G	G	G	G	G	G

Xoserve Detailed RAG Counts

| 44 |
| 148 |
| 19 |
| 7 |

Explanation of Status Differences

- ▶ **Delivery prerequisite** – Programme status of Green/Amber, as per wider CSA reporting
- ▶ **Process** – FTE impacts of manual workarounds yet to be fully quantified – See Risk #03
- ▶ **Management Information** – Appointment of a Reporting Manager is recommended to holistically coordinate operational reporting activities
- ▶ **PIS & Exceptions** – Work is still to be done to ensure that all stakeholders sign up to the proposed structures for PIS & that support models are clear / link in with the wider Op model. Limited information available on how the structure of the exceptions outsource team will integrate with the wider organisation
- ▶ **Transition & Cutover** – Pending outcomes of IDR2 to evidence Inflights solution stability
- ▶ **Facilities & Assets** – Dedicated stream of work now mobilised under implementation to manage Day 1 logistics. Formal approach document not yet made available for review

A1.2 GONG Exception Report (16/03/17)

Baringa

Detailed internal criteria currently defined as Red status – None of the items listed below directly map to External/Industry GONG criteria

Mapped Industry Ref	Internal Ref	Go / No Go Criteria	Status Comments	Mitigating Action Required	GL Impact
-	A2.12	Archiving (including retrieval mechanism) of data from solution components (for example Market Flow) has been defined, documented, agreed and tested	• Lack of clarity on the delivery plan for archiving solution, however this is not perceived to be a high impact item for Day 1	• Define archiving solution delivery plan	Low
-	B3.1	Any recommendations for Ways of Working, have been identified	• Fall out of manual workarounds still being defined • CR delivery represents some risk of late changes	• CSA believe this could be Amber status, as the gaps are not believed to be substantial	Med
-	B4.2	Document all new processes for Day 1	• Exceptions operational management processes are still not fully documented • The completion of LWI's are being impacted by SME resource constraints	• As MT Regression Test ends, refocus SME resources onto support of LWI definition • Ring-fence Wipro resources to support exception process definition	High
-	B4.3	Update the processes that are changing as a result of UKL Programme	• The completion of LWI's are being impacted by SME resource constraints	• As MT Regression Test ends, refocus SME resources onto support of LWI definition	High
-	B7.1	Core MI requirements identified and communicated to the data owners and is available and accessible in the required format	• MI/reporting requirements defined to date in operational silo's • Scope needs clarification with supporting implementation plans required	• Validate reporting requirements for Day 1 and perform gap analysis against MI provisioning from SAP, BW, IS Ops and Business driven reports	High
-	B11.1	Business benefits identified and schedule in place to track	• Benefits strategy defined however no formal benefits management process implemented. Holistic approach to UKLP benefits still to be agreed	• Agree approach and implement required tracking framework ahead of Go Live	Low
-	C.3.7	PIS Operational reports ready	• IS Ops Day 1 reporting defined however Business operations KPIs and reports still to be validated by Business owners	• Engage a dedicated PIS reporting manager to validate reporting scope is fit for purpose for PIS	High

A1.3 GONG Exception Report (16/03/17)

Baringa

Detailed Xoserve internal criteria currently defined as Amber status

Mapped Industry Ref	Internal Ref	Go / No Go Criteria	Status Comments	Mitigating Action Required	GL Impact
3.1-G2	A1.1.1	All functional Design Documents (BPDDs, Functional & Technical Specifications) updated and uploaded to SharePoint	Plan for update exists, although progress against plan has been slow.	Prioritise deliverables in line with criticality for Go Live	Low
-	A1.7.1	Legacy Data Archiving (Informatica) fully tested and signed off	The plan has been shared with business and the implementation has been planned post Go Live. Risk of achievement for GL.	Identify true need date (post GL) and plan to this.	Med
-	A1.7.2	Opentext Online Archiving fully tested and signed off	The plan has been shared with business and the implementation has been planned post Go Live. Risk of achievement for GL.	Identify true need date (post GL) and plan to this.	Med
2.6-G1	A1.8.11	Xoserve has identified resolutions for critical and high impact data migration defects for data testing completed until G1	Data defects required to be closed ahead of IDR2 are resolved. High priority defects for iGT and US remain.	Prioritise data defects through profiling Perform RCA to ID any reoccurring defects	High
2.6-G2	A1.8.12	Xoserve has deployed all fixes for critical and high impact data migration defects including fixes for any such additional defects identified post G1	Data defects required to be closed ahead of IDR2 are resolved. High priority defects for iGT and US remain. Progress continues to close defects. TCs have largely held plan and closed the majority of target defects, however new defects have been identified and defect resolution and validation continues into IDR2 and probably IDR3.	Prioritise data defects through profiling Perform RCA to understand any reoccurring defects	High
2.5-G2	A2.17.3	Xoserve are on track to complete the second dress rehearsal and data migration activity is on track to complete with agreed tolerances (See 1.5).	IDR2 commenced on schedule Clarity required as to the agreed tolerances mentioned for DM.	Prioritise data defects through profiling Perform RCA to understand any reoccurring defects	High
3.2-G2	B4.10	Manual Processes (Business and People) and associated RACI have been documented, reviewed, signed off and communicated to Process Owners	The completion of LWI's are being impacted by SME resource constraints	Reinforce resource allocation to LWI development	Med
-	B4.12	Inclusion of all workarounds (from CRs, Defects) IA'd and updated across FOM, Resourcing, Training, LWIs etc.	Workaround process in place however could be made more robust. Holistic review of workarounds required to ensure business impacts are quantified.	Complete the workaround analysis that identifies areas of the business & FTE impacts	High
-	B6.6	Resources in place to fulfil the required business capabilities to support readiness of new UK Link (Inc. FOM Day 1, PIS etc.)	People Transition placed key Xoserve personnel into roles. Completed on time on 28/2/17. PIS activities remain under review	Bolster PIS management. Confirm PIS structure and impact assess any changes on underlying process definition performed to date.	High
2.3-G3	B9.13	Business Continuity test has been undertaken with no critical issues	BC scenarios reviewed by Xoserve for new UKLP. Discussions ongoing to confirm any testing activities required.	Confirm plans for testing or business approval that no testing is required.	Med
-	B10.1	Relevant stakeholders understand anticipated AVHTs, volumes and source of exceptions	System message reconciliation tool in development to identify potential new exceptions Baselined exception and work item log with all SLA and AVHT is complete. Volumes have been modelled via intelligence gained from MT, testing, with sources now understood - all are being shared with all relevant stakeholders and seeking their sign off	Finalise solution option for the reconciliation tool and track development via plan milestones Complete stakeholder review and approval	High
-	B10.4	All business exceptions have been allocated a prioritisation	Evidence of prioritisation in place and agreed. SLA resolution times defined & in review	Complete documentation review and approval	High
-	B10.5	All technical exceptions have been allocated a prioritisation	Evidence of prioritisation in place and agreed. SLA resolution times defined & in review	Complete documentation review and approval	High
-	B10.8	All technical exceptions have a clear resolution route via IT360 and their prioritisation agreed with IS Operations.	Technical exceptions generally managed via EMMA (SAP). Some technical exceptions may require IT360 involvement (e.g. handoff to a separate recover team). Approach for this is being developed	Complete documentation review and approval	High
3.7-G2	C.3.1	PIS Commercials agreed, signed off and communicated	Schedule 21 of DBI contract to be revised and agreed	Add PM support to land contract for GL.	High
3.4-G2	C.3.10.1	Xoserve release plan and change management processes complete and internally approved.	MTRT defects badged for PGL require analysis to build a detailed PIS release schedule	To be completed as part of PIS release approach	High
-	C.3.11	Environment Strategy documented and signed off (SAP client transport routes, schedules and protocols)	This forms a key part of the Operate contract definition, with no confirmed plan in place to achieve required outputs.	Confirm and publish plan to industry.	High
-	D.2.1	Data Cleanse complete (within scope of Programme) and all migration blockers resolved	DQ issues persist which require industry action	Prioritise activities through DMG	Low
-	E4.10	Operate Contract in place	Operate contract remains in negotiation.	Confirm milestone for operate contract sign.	Med

A1.4 Xoserve submitted GONG Gate 2 status

1. Solution Readiness

ID	Criteria	Dec G2	G2.1	Int. Mar	G2.2	Justification
1.1	Overall assessment of their readiness.	A	A	N/A	A	
1.2	Data requirements and approach to data migration (DM Documentation signed off)	N/A	N/A	N/A	N/A	No G2 threshold
1.3	Latest updates to Data T-Rules communicated	G	G	G	G	
1.4	Transformation rules IA'd	N/A	N/A	N/A	N/A	N/A
1.5	Acceptable fall out from Bulk Load 2	G	B	B	B	
1.6	Critical market processes have been Market Trialed (MTRT on track to complete)	G	G	G	G	
1.7	Non-critical market processes (C3) subjected to Market Trials (no critical or high defects)	N/A	N/A	N/A	N/A	No G2 threshold
1.8	Cutover plans aligned to Low Level Transition Design and comm'd	A	G	G	G	Cutover plans finalised ahead of IDR2
1.9	Test traceability - Updated for latest requirements, design and test baselines	G	G	G	G	

2. Solution Stability

ID	Criteria	Dec G2	G2.1	Int. Mar	G2.2	Justification
2.1	NFT completed or is on track ahead of G3	A	A	B	A	Internal criteria focused on Batch test
2.2	Code Stability – Processes demonstrated	G	G	G	G	CSA – Operationalising regression process
2.3	IT DR and business continuity on track	G	G	G	G	
2.4	LLCP aligned to LLTD. IDR 2 on track.	A/A	G/A	G	G	IDR2 on track
2.5	IDR2 on track for DM activities	A	A	A	A	CSA – Delta Defect position
2.6	DM defects – Resolution of critical & high	G	A	A	A	IGTs & wider source defects
2.7	Non-compliant industry data addressed	N/A	N/A	N/A	N/A	N/A

3. Solution Sustainability

ID	Criteria	Dec G2	G2.1	Int. Mar	G2.2	Justification
3.1	Design Documentation gaps filled	G	G	A	A	CSA – documentation finalisation outstanding
3.2	All end-to-end process guides created/updated	G	A	A	A	LWI plan SME dependent
3.3	KT plan internally approved	G	G	G	G	
3.4	Release plan and CM processes complete and internally approved	G	A	A	A	PGL defect plan yet to be finalised
3.5	Ongoing data governance processes communicated	G	G	G	G	Programme govn. processes to endure
3.6	Cutover governance and contingency options approved	G	A	G	A	Cutover governance on track. Gaps likely in enduring Industry PGL governance.
3.7	Xoserve's PIS processes defined & int. approved.	G	G	A	A	PIS processes need further development

4. Enabling a Positive Customer Experience

ID	Criteria	Dec G2	G2.1	Int. Mar	G2.2	Justification
4.1	FAQs and messages are defined	G	G	G	G	
4.2	PIS exit criteria comm'd and int. approved	G	G	G	G	CSA – sign off status
4.3	Org Structure defined – R&Rs communicated	G	G	G	G	
4.4	TNA performed	G	B	B	B	

Slide Summary

- This slide provides a summary view of G2 RAG status across the four Ofgem success factors
- For each Industry criteria, the slide shows the G2 status submitted/forecast at G1 in December 2016, G2.1 and G2.2
- The 'Int. Mar' column maps the current status as driven by mapping the internal GONG criteria to the external/Industry criteria
- Commentary has been provided by exception where status is not Green

A2.1 - Readiness Assessment Landscape

A holistic picture of Go-Live readiness is formed via the channelling of multiple organisation statuses into a common set of GONG criteria.

OFGEM SUCCESS CRITERIA

Ofgem
Constituent Reps
Xoserve

INDUSTRY GONG CRITERIA
PNSG Recommendation & Decision

PWC
Baringa

Industry Participant Readiness Standardised Set ❶

Xoserve GONG criteria ❷

Criteria Mapping

Participant Readiness

Xoserve Readiness Full GNG Criteria

PWC

Xoserve

Wipro & Suppliers

Baringa
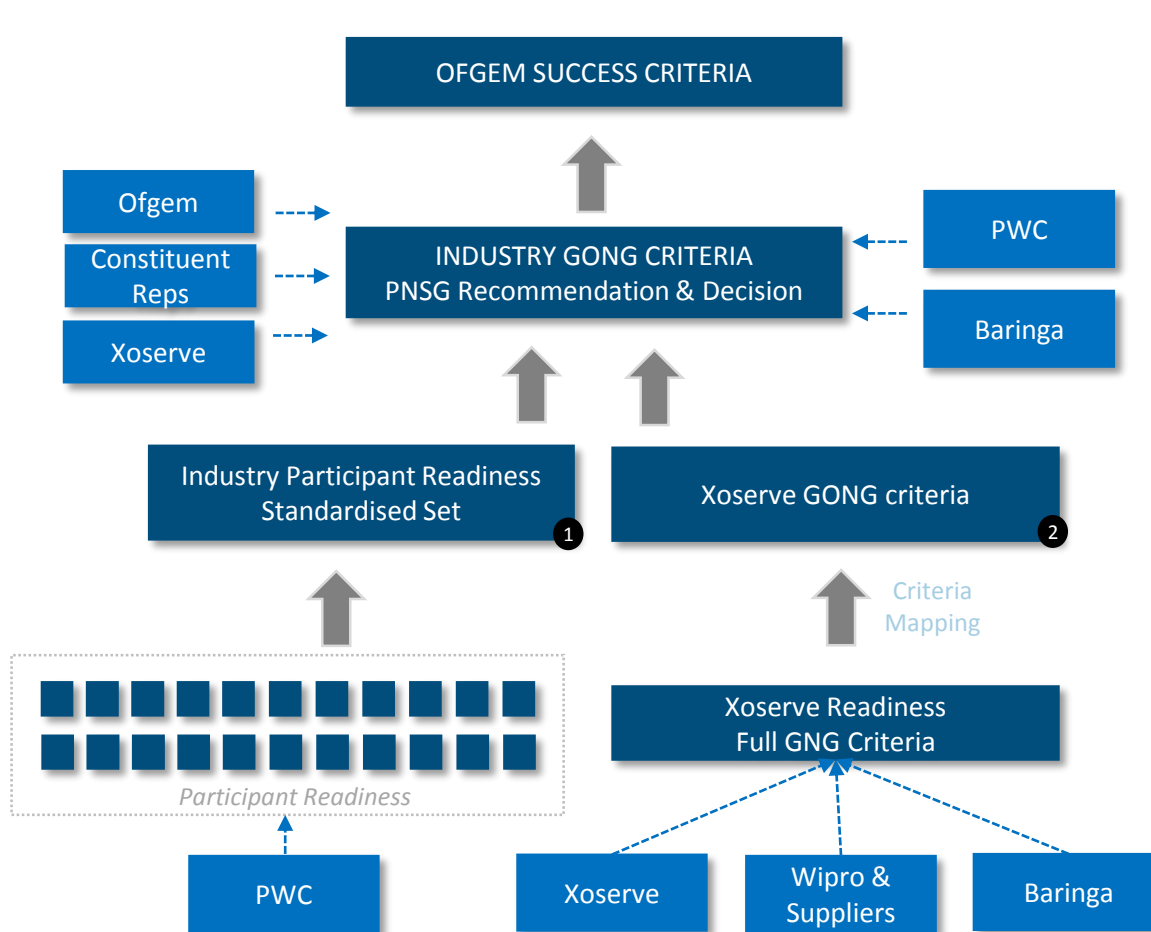
OFGEM have defined a set of success criteria to guide Programme priorities and Governance decisions

Ofgem will take an accountable role in the Industry GNG decision
PwC administer the Industry GONG criteria assessment

❶ Standardised set of Industry criteria managed via PWC industry portal
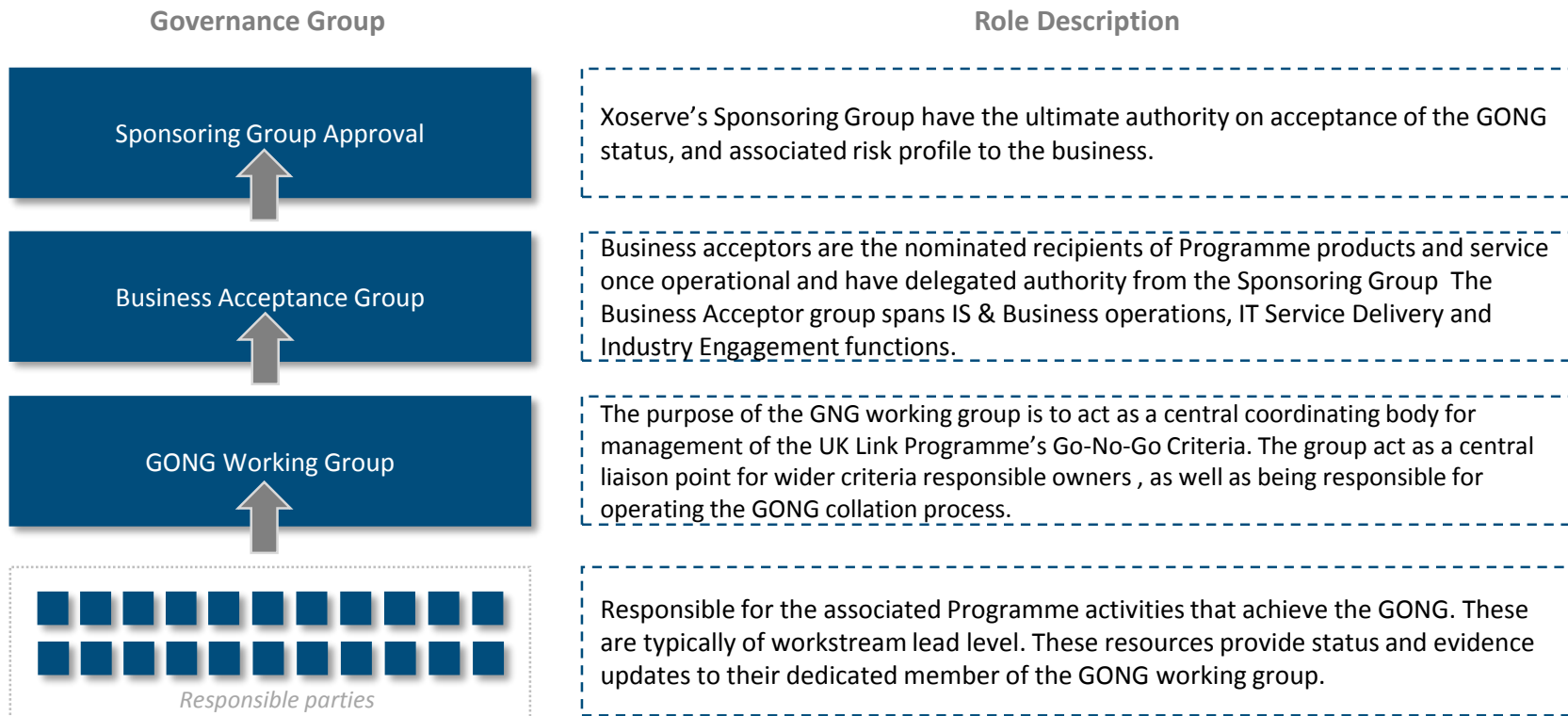❷ Xoserve have mapped its internal (and more detailed) GONG criteria to the Industry criteria set.

Industry participants will maintain their own internal readiness criteria
Xoserve have a detailed set of +250 readiness criteria

A number of parties are involved in the collation and review of criteria status and evidence

A2.2 - Xoserve GONG Governance

Xoserve operate a multi-tiered approval process for the GONG submission.

▲ The layered approach to approval reduces the overhead on the Programme by channelling updates through a reduced number of parties
▲ Accountability for sign off of each criteria is clearly separated from delivery responsibilities
▲ Baringa play a key role within each layer of governance, providing opportunity to review and challenge both delivery and acceptance aspects
Baringa's Industry facing GONG reports offer an opportunity to provide an independent assessment of the risk profile.

Governance Group	Role Description
Sponsoring Group Approval	Xoserve's Sponsoring Group have the ultimate authority on acceptance of the GONG status, and associated risk profile to the business.
Business Acceptance Group	Business acceptors are the nominated recipients of Programme products and service once operational and have delegated authority from the Sponsoring Group The Business Acceptor group spans IS & Business operations, IT Service Delivery and Industry Engagement functions.
GONG Working Group	The purpose of the GNG working group is to act as a central coordinating body for management of the UK Link Programme's Go-No-Go Criteria. The group act as a central liaison point for wider criteria responsible owners , as well as being responsible for operating the GONG collation process.
Responsible parties	Responsible for the associated Programme activities that achieve the GONG. These are typically of workstream lead level. These resources provide status and evidence updates to their dedicated member of the GONG working group.

A2.3 - Translation from Xoserve to Industry GONG

A structured process exists to translate internal Xoserve GONG status into the Portal submissions made to Ofgem/PWC.

Xoserve Detailed Criteria (Example)

A2	Delivery pre requisites
A2.1	System Testing has been successfully completed and signed off
A2.2	All SIT test cases have been successfully executed, critical issues resolved and signed off (UKL DBI Application, Gemini, CMS and IP/DES)
A2.3	Performance Testing has been successfully completed, critical issues resolved and signed off
A2.4	Penetration Testing has been successfully completed, critical issues resolved and signed off
A2.5	Operational Acceptance Testing has been successfully completed critical issues resolved and signed off
A2.6	Production smoke test (functional and technical) has been successfully completed and signed off
A2.7	Market Trials Test has been successfully completed and signed off
A2.7.1	Xoserve and Market Participants' are on track to complete Market Trials regression testing.
A2.7.2	Xoserve and Market Participants have completed Market Trials regression testing.
A2.10	Backup and Recovery across the solution have been identified, documented, agreed and tested
A2.11	Recovery options for the failure of a component (for example Market Flow) within the solution have been identified, documented, agreed and tested
A2.12	Archiving (including retrieval mechanism) of data from solution components (for example Market Flow) has been defined, documented, agreed and tested
A2.13	A traceability report/extract from RRC and HPQC has been produced demonstrating that all business requirements have been tested via at least one test case
A2.14	A traceability report/extract from RRC and HPQC has been produced demonstrating that all non functional requirements have been tested via at least one test case
A2.15	Any approved change requests have been completed and signed off, or an approved plan is in place for completion within a defined framework
A2.16	There are no risks/issues currently open that will prevent entry to Market Trials
A2.17	There are no risks/issues currently open that will prevent cutover
A2.17.1	Three Dress Rehearsals completed successfully and signed off
A2.17.2	Xoserve and Market Participants have completed the first dress rehearsal run and data migration activity has completed with agreed tolerances (See 1.5).
A2.17.3	Xoserve are on track to complete the second dress rehearsal and data migration activity is on track to complete with agreed tolerances (See 1.5).
A2.17.4	Xoserve have completed the second dress rehearsal and is on track to complete the third dress rehearsal without any blocking issues in data

1 Xoserve originally baselined a set of GONG criteria in Summer 2015, and have maintained a 'live' view of the criteria and status since this point

Xoserve GONG Roll-Up

 # Detailed Criteria

Ref	Go / No Go Criteria
A. Solution, System and Data Readiness	
A.1	Solution Integrity
A2	Delivery pre requisites
B. Business Readiness	
B1	Leadership
B2	Governance
B3	Ways of Working
B4	Process
B5	Structure
B6	Capability (including System Training, Engagement and Communication)
B7	Management Information
B8	Performance Management
B9	Service Management
B10	Exceptions
B11	Business Benefits
C. Transition Readiness	
C.1	Transition and Cutover
C.2	Facilities & Assets
C.3	Post Implementation Support
C.2	BAU Operations
C.3	Go Live Controls
D. Industry Readiness	
D.1	Comms and Training
D.2	Data Cleanse
D.3	Testing
D.4	Transition
E. Other	
E.1	Accreditation
E.2	Reporting
E.3	Licences
E.4	Contracts
E.5	SAP Findings

54

25

85

52

13

20

2 Criteria are rolled up to headline readiness categories E.g. Delivery Prerequisites as shown. The GNG roll-up is used for Xoserve Governance/Reporting (Inc. Baringa's GNG Report to Industry)

Mapping to Industry GONG criteria

3

- Criteria have been mapped between the Internal GONG and Industry GONG criteria

- The following mapping logic has been applied:
  - Criteria have been mapped at either individual (detailed) criteria level, or have been grouped to provide the best fit and full coverage to industry criteria
  - Where gaps have been identified, the Industry criteria have been directly added to the Xoserve internal GNG
  - Industry required evidence has also been added to the Evidence tracked within the Xoserve internal GNG process

- This mapping informs the status and provides supporting commentary that is submitted into the Ofgem Portal for each GONG Gate

- Where an aggregation of status is required from many lower level criteria, a risk based decision is made through governance, that assesses:
  - Materiality of risk to Go Live and Operations
  - Likelihood of realisation, and opportunity to mitigate ahead of future GONG gates.

- Baringa are involved at all stages of this collation and mapping process.

Appendix B: Market Trials Code Stability

A review of readiness to exit MT Regression Test

Xoserve
March 2017 v1.0

Executive Summary (I)

Context

- The achievement of Market Trials code stability was a key input into the decision to enter Market Trials Regression Test in January 2017

- The definition of Market Trials 'Code Stability' was agreed as the following:
  - ✓ Provision of stable code to enable a 'clean' run during MT Regression Testing – Building stakeholder confidence in the solution
  - ✓ No changes to code undergoing MT Regression testing (Or impacting Market Trials critical C1/2 processes)

- In advance of entering MT Regression Test, governance and supporting Xoserve and Industry processes were put in place to ensure that there was controlled decision points for the deployment of any code to the MT regression test environment - These have been maintained through the MT Regression Test phase

- Concurrent activity has continued during MT Regression Test and must be considered as a potential source of Code Stability impacting defects: CR delivery, In flight development, Residual IDR1 defects

- The decision to exit Market Trials Regression Test must be based on achievement of the agreed exit criteria, and the level of confidence in the stability of the solution. This is based on the level of change encountered during MT Regression Test, the risk of further change following closure of the phase, and confidence in the control processes in place to govern associated decisions.

Scope of Document

Baringa have been requested by Ofgem to provide an assurance point of view on Code Stability, that supports the decision to exit MT Regression Test, specifically answering:

1. Question 1 – Have Xoserve achieved a level of functional code stability that is sufficient for MT Regression to Exit?
2. Question 2 – Do Xoserve have adequate controls and processes in place to ensure the ongoing maintenance of functional code stability through post-MTR and through to go-live?

Our Approach

Baringa's approach to validating the MT Code Stability status has been broken into the following elements:

- Defect analysis – Leveraging Programme reporting, and performing comparisons against underlying HPQC (test management tool) data to ensure that all defects are reported
- CR review – A review of the latest status of the CR pipeline
- Process review – Review of the success of the industry & internal processes supported by the Release Deployment Board (RDB) and change governance

Executive Summary (II)

Baringa

Conclusions

- Based on the level of change (defects, CRs & wider development) encountered during MT Regression Test, **Baringa are supportive of exiting the formal phase of MT Regression Test**
- Whilst the governance processes have been successful in stabilising the code for MT Regression Test, Baringa feel that this has resulted in a tangible, but as yet unquantified risk to Xoserve's business operations due to the number of manual workarounds in place. Analysis is in progress and must be urgently finalised to **quantify the operational overhead** and confirm that it is acceptable within the defined Day 1 operating model
- With over 2 months until Go-Live there remains a risk that a further minimal level of functional change will still be required
- Should change be identified that is judged to be essential (e.g. Defect fixes required in order to reduce Operational risks), options must be considered on how best to maintain Industry confidence in the integrity of the solution.
- It is Baringa's view that Xoserve's publication of the standardised regression test outputs, and continued publication of change notes to Industry should provide the required level of confidence. The overhead of any **additional market regression testing at such a congested period of the Programme may represent a greater risk to go live** than the risk to solution stability from defect resolution.
- Baringa recommend that the **industry deployment governance process established for MTR is utilised if required through to go-live** (noting special arrangements are in place for urgent IDR fixes) to provide Market Participants with full visibility should further deployments be necessary.

Question 1 – Have Xoserve achieved a level of functional code stability that is sufficient for MT Regression to Exit?

▲ Summary findings documented below are based on data extracted from Xoserve's source systems on 10th March (in line with latest defect reporting) *The forecast RAG articulates a predicted status as of 24th March, assuming that recommendations are implemented.*

Factors	RAG 10/03	Current Findings	Recommendation	RAG 24/3
Defects (all sources)		• **311 defects open at or since 09/01** (includes 238 Xoserve and 73 MP raised) • **All defects** (apart from Data) **have been communicated via the established industry process** – for fix approval and deployment confirmation where they have MTR impacts and as an FYI where they do not • **82 remain open** • **21 impact MTR and are undergoing fix** • 38 have been assessed to have Xoserve internal impacts only • 23 are undergoing functional / Ind. Govn assessment and may require a fix • **A definitive fix and deployment schedule is yet to be established for defects undergoing fix** – It is accepted that some will not be delivered in sufficient time for MP retest however there is a risk fixes may extend beyond the MTR timeline • 20 defects are currently undergoing manual workaround development. **Aggregate FTE/Ops impacts for workarounds are yet to be quantified** • **'Approval in principle'** agreed via Weekly Defect call for IDR related defects	• **Establish a granular fix plan** for all 'to be fixed' defects • Undertake an assessment of which of the remaining defects can be **fixed and retested by MPs within the MTR timeline – prioritise fix efforts for these** • **FTE impacts need to be quantified** for workarounds and **resolution options revisited should Ops impacts be deemed unsustainable**	
Change Requests		• **22 Change Requests** have been raised since MTR commenced of which 12 have been deferred or closed • **Assessment of stability impacts during the IA process is much improved** and solution options are devised accordingly • CR **deployments** during MTR have been **communicated via the industry weekly calls** • **DN Sales solution refined to minimise Code Stability impacts** • IA pending for a CR which may have very minor stability impacts • 18 deferred CRs are confirmed as needing workarounds and 21 are undergoing assessment – as with defects, **Ops impacts remain unquantified**	• *As above re FTE impacts for workarounds*	

Question 1 – Have Xoserve achieved a level of functional code stability that is sufficient for MT Regression to Exit?

Baringa

▲ Summary findings documented below are based on data extracted from Xoserve's source systems on 10th March (in line with latest defect reporting) *The forecast RAG articulates a predicted status as of 24th March, assuming that recommendations are implemented.*

Factor	RAG 10/03	Current Findings	Recommendations	RAG 24/3
In-flights		• Development approach utilised for in-flights has **minimised code stability impacts** (where possible common code objects have been copied – this however adds a short-term maintenance overhead) • **Inflights code base deployed to MTR environment** • Inflights defects have followed **the established industry governance and comms processes** • Inflight scenarios will be tested in IDR2 and 3 and there is therefore **a risk that further defects will be identified**	• Employ strict prioritisation for inflights defects – **fix those which are IDR critical** and align others with a wider defect release approach	
Remaining Activities		• Residual test activity remains in the plan (IDRs, Pen Test, CR delivery) which may **uncover a small number of C.S. impacting defects**	• Institute regression process (*see next slide*)	

Summary Questions	Key findings
• To what level has functional code stability been maintained through MT regression test	• A high level of functional code stability has been maintained within MTR when assessed against the code stability criteria. Where a potential need for a change has been identified options have been sought to alleviate / minimise stability impacts (deferrals / workarounds).
• Where change has been necessitated what mitigations have been put in place?	• All code deployments to the MTR environment have been tightly controlled via well established Xoserve and Industry governance processes providing all parties with full visibility of any change being deployed to the environment
• Do these mitigation steps place functional code stability (and the exit of MTR) at risk?	• No – however steps are required to support onward management of Code Stability in the period beyond MTR through to go-live – (see next section)

Question 2 – Does Xoserve have adequate controls and processes in place to ensure the ongoing maintenance of functional code stability post MTR through to go-live?

Question	RAG 10/03	Current Findings	Recommendations: focused on managing Code Stability up to Go Live	RAG 24/3
• What is the extent and quality of regression testing performed by Xoserve		• Xoserve Regression test undertaken to date has been done so on a **change by change basis** and is more rigorously tracked for CRs than defects • A **Regression Test Working Group (RTWG) has recently been established** to assess regression requirements for any remaining functional change • An **Regression Test suite has been developed** with input from SMEs and Functional Leads to **ensure process / data variant coverage** – Baringa have reviewed this and support the approach • However, the RTWG and use of the Regression Test suite has **yet to be fully operationalised and therefore not employed throughout MTR** – This risk has been largely offset by market participant testing during MTR	• **Fully operationalise the RTWG and use of the Regression suite** • Any **essential** further functional changes should be bundled and **scheduled to deploy at an appropriate juncture within the plan** to drive regression test efficiencies • The **scope and outcome of regression testing** should be packaged and shared with Market Participants to provide **confidence in solution stability and alleviate the need for further market led test activity**	
• Are sufficient controls in place to ensure that changes to code, that could impact functional code stability, are properly identified and managed?		• A **Release Deployment Board (RDB) is utilised to govern all deployments** to the Quality (internal assurance test) and MTR environments – this will endure up to go-live • **RDB has been fully integrated with the industry deployment comms and govn. processes** which have been in place during MTR • **RDB release notes are published externally** to provide confirmation of all deployments into the MT environment • **CR stability impacts are assessed during the IA process** and solution options are selected so as to alleviate/minimise CS impacts	• **Strengthen RDB validation of regression test coverage** ahead of deployment approvals	

Question 2 – Does Xoserve have adequate controls and processes in place to ensure the ongoing maintenance of functional code stability post MTR through to go-live?

Question	RAG 10/03	Current Findings	Recommendations: focused on managing Code Stability up to Go Live	RAG 24/3
• Is there appropriate governance of changes which do not impact functional code stability?		• **Yes –** the remit of the RDB Governance process covers the full breadth of changes	Establish the role of **RDB during the PIS phase** and any **interlinks with IS Ops led change control governance**	