ASX Limited

Independent Expert Assessment of ASX's Actions to address the IBM Review Recommendations

25 February 2022

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1. Executive Summary

Introduction

In November 2020 an outage occurred following a major upgrade to ASX Operations Pty Ltd equity trading platform (ASX Trade), called the ASX Trade Refresh project. Consequently, the Australian Securities and Investments Commission (ASIC) and the Reserve Bank of Australia (RBA) required an Independent Expert review of the ASX Trade Refresh project to be completed. ASX appointed IBM Australia Limited (IBM) to undertake this review. IBM made 59 recommendations ("Recommendations" or "IBM Review Recommendations") in total across the following seven key domains in the review: risk, governance, delivery, requirements, vendor management, testing and incident management.

ASX subsequently developed a management response plan ("Plan") which consists of 173 deliverables ("ASX Action") to address the 59 IBM Recommendations.

In November 2021, the Minister imposed certain Licence Conditions on ASX. The Australian Market Licence (ASX Limited) Additional Conditions Notice 2021 (No. 1) dated 24 November 2021 requires ASX to:

- Address each of the IBM Review Recommendations to the satisfaction of ASIC, and
- Appoint an Independent Expert ("IE") to conduct an assessment of its implementation of the ASX Actions to address the IBM Review Recommendations.

ASX has sought the consent of ASIC to appoint Ernst & Young (EY) as the IE to conduct this assessment.

Scope

In accordance with Licence Condition 3, ASX must by 31 January 2022 and thereafter within 14 days of each quarter end date occurring during the period from 31 March 2022 to 30 June 2023, give a report to ASIC and the IE containing an update on:

- The progress of the implementation of the ASX actions to address the IBM review recommendations, and
- If there are any issues in implementing any ASX actions, the reasons for those issues and what remedial action ASX will take to address them.

The quarterly report must be accompanied by an attestation from the relevant oversight body from ASX.

The scope of our engagement as the IE in accordance with the relevant Licence is to:

- Review and assess each of the quarterly reports produced by ASX (as required under the relevant Licence), and
- Within 30 days of receipt of each quarterly report, provide ASX and ASIC with a written report setting out whether the ASX actions undertaken in the period covered by the report demonstrate appropriate implementation of, and progress towards addressing, the IBM review recommendations.

Approach

Our approach is to assess the quarterly reports produced by ASX. This includes an assessment of the closure packs and supporting evidence for the ASX actions reported as closed during the period. As part of our assessment, we will consider:

- Whether the ASX Actions comprehensively address the relevant IBM Review Recommendations
- Whether the ASX Action is implemented in a sustainable manner
- The skills and experience of the people engaged by ASX to implement the ASX actions

- The closure of ASX actions is supported by demonstrable evidence, and has been subject to appropriate internal due diligence and governance processes
- The consistency of the attestations reported in ASX's quarterly report with our understanding of the status of the ASX actions.

Summary findings and recommendations

As the appointed IE we have agreed to provide a written report "setting out whether the ASX actions undertaken in the period covered by the report demonstrate appropriate implementation of, and progress towards addressing, the IBM review recommendations." In response we provide you with the following summary findings and the detailed supporting rationale in the remainder of this report.

Appropriate progress towards addressing and implementation of the IBM review recommendations

We recognise that ASX have developed a program to address the IBM Recommendations called the Delivery Excellence Program ("the Program"), where they have dedicated resources focused on closing the 59 Recommendations, and we have interviewed these key individuals responsible for the program delivery.

We have found that the Program is well run, has the appropriate governance and oversight, and is staffed and supported by individuals well suited to deliver a quality outcome against the ASX Actions reported as closed to date.

We have reviewed the mapping developed by ASX to align its Actions to the closure of IBM Recommendations and confirm that it is comprehensive and appropriate subject to the completion of the ASX Actions.

We have reviewed the overall ASX schedule to close out each of the IBM Recommendations and believe that it is appropriate and reasonable. Twenty-two (22) of these Recommendations are being addressed in the

first quarter of the reporting with nearly all closed completely and 37 of the 59 total Recommendations still requiring action as part of this program of work. In this reporting cycle and evaluated against the 22 Recommendations, twenty-one (21) Recommendations have executed fully and appropriately with four (4) Recommendations requiring follow-up to evaluate the ongoing sustainability of the ASX Action. This demonstrates appropriate progress towards addressing the IBM Review Recommendations. We note that some of the more complex ASX Actions are executed in later quarters and believe this to be a reasonable and appropriate strategy. Further, we have witnessed the Program identifying resource expertise needs in advance and securing talent to maintain its scheduled completion of ASX Actions.

We will continue to evaluate and offer commentary on the processes, governance, and resources as we evaluate the closure of ASX Actions addressed by the Program in the future.

We have found that the ASX Actions are reasonable and appropriate with a limited number of ASX Actions requiring re-evaluation in a future quarterly review.

We acknowledge and thank ASX for its cooperation in undertaking our Independent Expert assessment activities to date.

2.   Introduction

2.1   Background

Recommendations Review

To address the 59 IBM Recommendations, ASX subsequently developed a management response plan which consists of 173 deliverables. The Plan is structured around the following seven elements (which are different to the seven domains from the IBM review) that seeks to improve ASX's project execution capability and to reduce the likelihood of similar project execution incidents in the future:

- Ensuring diverse thinking, avoidance of group think and challenge
- Increasing resources
- Upgrading policies, standards, and frameworks
- Educating staff so that they clearly understand the standards and practices expected of them
- Monitoring individual projects and the portfolio for compliance with ASX's policies, standards and
- frameworks
- Improving ASX's testing capability and capacity
- Improving ASX's project reporting and quality.

In November 2021, the Minister imposed certain Licence Conditions on ASX. The Australian Market Licence (ASX Limited) Additional Conditions Notice 2021 (No. 1) dated 24 November 2021 requires ASX to:

- Address each of the recommendations to the satisfaction of ASIC, and
- Appoint an Independent Expert (IE) to conduct an assessment of its implementation of the ASX actions to address the IBM review recommendations.

ASX has sought the consent of ASIC to appoint Ernst & Young (EY) as the IE to conduct this assessment.

2.2   Scope

EY has been engaged to deliver the following scope of work:

In accordance with Licence Condition 3, ASX must by 31 January 2022 and thereafter within 14 days of each quarter end date occurring during the period from 31 March 2022 to 30 June 2023, give a report to ASIC and the IE containing an update on:

- The progress of the implementation of the ASX actions to address the review recommendations, and
- If there are any issues in implementing any remediation actions, the reasons for those issues and what ASX Action ASX will take to address them.

The quarterly report must be accompanied by an attestation from the relevant oversight body from ASX.

The scope of our engagement as the IE in accordance with the relevant licence condition is to:

- Review and assess each of the quarterly reports produced by ASX (as required under Licence Condition 3) and
- Within 30 days of receipt of each quarterly report, provide ASX and ASIC with a written report setting out whether the ASX Actions undertaken in the period covered by the report demonstrate appropriate implementation of, and progress towards addressing, the IBM review recommendations.

2.3 Approach

When conducting our assessment for the delivery of this report, the following activities were performed:

1. *Documentation review:* A detailed review and analysis of ASX's addressed recommendations and related artefacts (closure packs and additional supporting evidence). All documentation was provided to EY by ASX based on a documentation request. A list of documentation reviewed can be found in Appendix D.

2. *Questionnaire submission to ASX:* The EY team then submitted a set of questions related to the recommendations and subsequent ASX actions one day prior to meeting where ASX prepared responses for the joint recommendation review sessions. A list of questionnaires submitted to ASX can be found in Appendix C.

3. *Recommendation Review Workshops:* We held sessions to review and discuss the recommendations between key ASX stakeholders and EY SMRs (Subject Matter Resources) to go through the pre-submitted questions related to ASX's remedial actions approach. A list of all workshops conducted with ASX can be found in Appendix A and a list of interviewed ASX stakeholders can be found in Appendix B.

Following our review of the documentations/evidence and recommendation review workshops with the relevant ASX stakeholders, the EY team have determined whether the ASX Actions are appropriate to close the IBM Recommendations by adopting the following approach for each of the ASX Actions:

1. **Has the recommendation been fully addressed by the ASX Action(s)?**

   Yes ✅ **/ No** ❌ **/ Partially done** ✅

2. **Were ASX Action(s) in response to the IBM Recommendation reasonable and appropriate?**

   Yes ✅ **/ No** ❌ **/ Partially done** ✅

3. **Is the ASX Action(s) sustainable? Has the ASX response to the recommendation considered measures to enforce/ ensure that the ASX Actions remain closed in the future?**

   Yes ✅ **/ No** ❌ **/ Partially done** ✅

The assessment criteria described above determines if the recommendation was fully, partially, or not appropriately addressed. For detailed and comprehensive commentary around our decision, please refer to each recommendation's 'Findings' section.

2.4 Limitations

We draw your attention to the limitations inherent in this report:

- Our work was not performed in accordance with generally accepted auditing, review, or other assurance standards in Australia and accordingly does not express any form of assurance. This report does not constitute legal opinion or advice. We have not conducted a review to detect fraud or illegal acts.

- Our work does not assume any responsibility for any third-party products, programs or services, their performance or compliance with your specifications or otherwise.

- Our work did not intend to identify, address, or correct any errors or defects in your computer systems, other devices, or components thereof ("Systems"), whether or not due to imprecise or ambiguous entry, storage, interpretation, or processing or reporting of data. We are not be responsible for

any defect or problem arising out of or related to data processing in any Systems.

- Our Recommendations review was limited to the information available and provided by ASX at this stage, where for future reviews included in the plan only high-level planning has been conducted and a detailed analysis of scope and effort is pending.

- Our review was limited to documents provided by ASX as deemed relevant in line with the agreed scope and EY requests, with the expectation that ASX had those artefacts documented to satisfy its own reporting needs.

- Any projection of the outcome related to the recommendation's response and its sustainability for future periods, is subject to the risk that the actions may become inadequate due to changes in conditions, or that the degree of compliance around remedial actions taken may deteriorate over time.

- Our scope under the licence conditions requires us to oversee the ASX Actions taken related to ASX's Plan and our Independent Expert review which are relevant to the recommendations and its remedial actions. For the purpose of our engagement, we define oversee as to observe and inspect ASX has acted accordingly. ASX is accountable and responsible for the implementation activities and EY will not act as management or direct the implementation.

2.5   Use and disclosure of our reports

We are providing specific advice only for this engagement and for no other purpose and we disclaim any responsibility for the use of our advice for a different purpose or in a different context. If you plan to use this advice on another transaction or in another context, please let us know and provide us with all material information that we can provide advice tailored to the appropriate circumstances.

Our Reports (including the EY Summary Reports) may be relied upon by ASX and ASX's regulators, ASIC and the RBA, for the purpose outlined in this SOW only. We understand that ASIC and the RBA may issue a media release and/or a public report referring to or publishing the content of our Reports and may publish our Reports and/or the EY Summary Reports or make or issue its own summary from the content of our Reports.

For the avoidance of doubt, no other party other than ASX, ASIC and the RBA may rely on the Reports. We disclaim all responsibility to any such other party for any loss or liability that the other party may suffer or incur arising from or relating to or in any way connected with the contents of our Reports, the provision of our Reports to the other party or the reliance upon our report by the other party.

3. Our Findings

We assessed the ASX Actions taken by ASX as part of their response plan to the IBM recommendations and observed whether ASX have taken the adequate steps to address the recommendations.

Evidence provided for our review was well documented and shows considerable executive support and sponsorship at the outset of the program as well as strong Board oversight.

The following pages outline our review assessment as a summary of all the 22 recommendations submitted by ASX to ASIC and RBA.

Summary of Review Recommendations Assessment

Below is a summarised view of the outcome of each Recommendation and its related ASX Action(s). For detailed information around recommendation findings please refer to the following pages.

#	Recommendation / ASX Actions	Executed	Appropriate	Sustainable
1.2.1	**Recommendation: Ensure Line 2 resource expertise**	**Recommendation has been partially addressed**		
	ASX Action 1: A new Senior Manager, Enterprise Risk Management will be recruited to be the Line 2 representative on P1 and/or high-risk projects (excluding CHESS)	✓	✓	✓
	ASX Action 2: Post the PRA, the Sponsor and the CRO will attest that appropriate expertise for Line 2 challenge is available	✓	✓	✓
	ASX Action 3: Review the current Expectations of Line 2 on PSGs documentation	✓	✓	✓
1.2.4	**Recommendation: Enhance controls re PRA and Process-RA mapped to risk register**	**Recommendation has been addressed**		
	ASX Action 1: Update EPRM framework and the Project Risk & Issues Management framework to require that risks are transferred to the RAID register	✓	✓	✓
	ASX Action 2: Update the Expectations of Line 2 on PSGs documentation to include this as an advice/challenge topic	✓	✓	✓
1.3.1	**Recommendation: Update policy to ensure PRA and Process-RA performed frequently**	**Recommendation has been addressed**		
	ASX Action 1: The EPRM framework will be updated to require that the PRA is done semi-annually through a project's live (note that this decision was taken in Jan 2021)	✓	✓	✓
	ASX Action 2: The EPRM framework will be updated to require that the Process Risk Assessment is considered at multiple times through the project and that is suitable for this risk management task	✓	✓	✓
1.3.2	**Recommendation: Ensure risks identified and logged**	**Recommendation has been addressed**		
	ASX Action 1: Update the Project Risk & Issues Management framework to include this as a requirement	✓	✓	✓
	ASX Action 2: Update the Expectations of Line 2 on PSGs documentation to include this as a challenge topic	✓	✓	✓
	ASX Action 3: Create guidance note on RAID management (akin to Risk Champions guidance note)	✓	✓	✓

#	Recommendation / ASX Actions	Executed	Appropriate	Sustainable
1.3.3	**Recommendation: Ensure project RAID shared with PSG**	Recommendation has been addressed		
	ASX Action 1: Include as a topic of discussion in the Risk culture and awareness short and long term education session in response 1.1.1-2	✔	✔	✔
	ASX Action 2: Update the Expectations of Line 2 on PSGs to challenge on this topic	✔	✔	✔
	ASX Action 3: Create guidance note on RAID management (akin to Risk Champions guidance note)	✔	✔	✔
	ASX Action 4: Define standard reporting requirements	✔	✔	✔
	ASX Action 5: Enhance existing RAID dashboards	✔	✔	✔
	ASX Action 6: Create guidance note on risk reporting at PSGs	✔	✔	✔
1.3.5	**Recommendation: Ensure ERM Line 2 included in timely manner**	Recommendation has been addressed		
	ASX Action 1: Include as a topic of discussion in the Risk culture and awareness short and long term education session in response 1.1.1-2	✔	✔	✔
	ASX Action 2: Update the EPRM framework to include this as a requirement	✔	✔	✔
	ASX Action 3: Update the Expectations of Line 2 on PSGs document to make this a requirement that is escalated to the Sponsor and CRO if not met	✔	✔	✔
1.3.9	**Recommendation: Ensure RAID reported to PSG and tracked for closure**	Recommendation has been addressed		
	ASX Action 1: Include as a topic of discussion in the Risk culture and awareness short and long term education session in response 1.1.1-2	✔	✔	✔
	ASX Action 2: Define standard project risk reporting requirements and develop dashboards	✔	✔	✔
	ASX Action 3: Create PSG Sponsor and member guidance note covering reporting requirements	✔	✔	✔
	ASX Action 4: Update the Expectations of Line 2 on PSGs document to challenge on this concept	✔	✔	✔
1.3.10	**Recommendation: Quantify risks using ASX standard methods (likelihood/impact)**	Recommendation has been addressed		
	ASX Action 1: Review the project risk scalars (these were updated on 5th may and signed off by the CRO)	✔	✔	✔

#	Recommendation / ASX Actions	Executed	Appropriate	Sustainable
3.1.10	ASX Action 2: Include as a topic of discussion in the Risk culture and awareness short and long term education session in response 1.1.1-2	✔	✔	✔
	ASX Action 3: Create Sponsor and PSG member guidance document	✔	✔	✔
	ASX Action 4: Update the Expectations of Line 2 on PSGs document to challenge on this concept	✔	✔	✔
2.1.1	Recommendation: Document PSG roles/responsibilities based on risk & include independence	Recommendation has been addressed		
	ASX Action 1: Review existing Project Governance guidelines and update to ensure clear purpose and roles and responsibilities of governance forum membership	✔	✔	✔
2.1.2	Recommendation: Evaluate if PSG needs member criteria re independence	Recommendation has been addressed		
	ASX Action 1: Line 2 ERM to be allocated to all P1 or high risk project PSGs	✔	✔	✔
	ASX Action 2: Composition of project governance forums will be reviewed as part of Recommendation 2.1.1	✔	✔	✔
2.1.3	Recommendation: Evaluate if P1 and/or High risk projects need dedicated PSG	Recommendation has been addressed		
	ASX Action 1: Update the Project Governance section of the ASX Delivery Framework to reflect this	✔	✔	✔
2.1.4	Recommendation: Update policies to require PSG monitors against defined success metrics	Recommendation has been addressed		
	ASX Action 1: Review and update the Project Governance guidelines to ensure expectations regarding project tracking and reporting are clearly outlined	✔	✔	✔
3.1.2	Recommendation: Checklist to increase scope of lessons learned from PIRs	Recommendation has been addressed		
	ASX Action 1: Complete the Lessons Learnt Framework and Repository Refresh	✔	✔	✔
	ASX Action 2: Introduce Mandatory Requirement to review Lesson Learnt Repository as part of the 'Define & Plan' stage of the Project Lifecycle	✔	✔	✔
3.1.3	Recommendation: Update policy – require PIR lessons learned considered at project initiation	Recommendation has been addressed		
	ASX Action 1: Complete the Lessons Learnt Framework and Repository Refresh	✔	✔	✔

#	Recommendation / ASX Actions	Executed	Appropriate	Sustainable
3.1.3	ASX Action 2: Introduce Mandatory Requirement to review Lesson Learnt Repository as part of the 'Define & Plan' stage of the Project Lifecycle	✔	✔	✔
3.1.4	Recommendation: Update policy – EPMO involved from initiation in P1 projects	Recommendation has been addressed		
	ASX Action 1: A step will be introduced into the Initiation stage of the Delivery Framework that outlines who and how to engage EPMO to ensure standard tooling setup	✔	✔	✔
3.2.4	Recommendation: Consider policy update so that P1 or High risk project PSGs meet fortnightly	Recommendation has been addressed		
	ASX Action 1: Investigate and determine appropriate PSG meeting frequency for P1 or high risk projects	✔	✔	✔
	ASX Action 2: Include this as a requirement in the Governance guidelines of the ASX Project Management Framework	✔	✔	✔
	ASX Action 3: See 1.3.9 point 2 (Define standard project risk reporting requirements and develop dashboards)	✔	✔	✔
3.2.6	Recommendation: Update policy so that P1 projects run by in-house Project Manager	Recommendation has been addressed		
	ASX Action 1: The Enterprise Project Management framework will be updated to list this as a preference where possible. If this is not possible nor sensible then this will be included in the business case for PGG noting.	✔	✔	✔
	ASX Action 2: The Sponsor with assistance from the Project Assurance Specialist will then be accountable for compliance with project delivery practices.	✔	✔	✔
3.2.7	Recommendation: Ensure that key Go-Live meetings documented	Recommendation has been addressed		
	ASX Action 1: Enterprise Project Risk Management framework to be updated to reflect this requirement.	✔	✔	✔
4.1.1	Recommendation: ASX should maintain detailed requirements log to lessen reliance on single vendor	Recommendation has been addressed		
	ASX Action 1: Review the Enterprise Project Management framework on requirements definition for new projects, updating it to define which projects would require ASX to create/maintain a full requirement register in-house and at what level of detail.	✔	✔	✔
	ASX Action 2: Identify the next project that is likely to apply this issue to. This is likely the next upgrade of NTP.	✔	✔	N/A
	ASX Action 3: Consider whether to apply this retrospectively to ASX Trade or to await the next refresh to this	✔	✔	✔

#	Recommendation / ASX Actions	Executed	Appropriate	Sustainable
5.1.1	**Recommendation: Perform contract acceptance at end of project lifecycle**	Recommendation has been partially addressed		
	ASX Action 1: Update ASX's Vendor Management framework to require contract acceptance at the end of the project lifecycle once integration and end to end testing have been completed	✔	✔	✔
5.1.2	**Recommendation: Create guidelines for supplier contract acceptance testing**	Recommendation has been partially addressed		
	ASX Action 1: Guidelines will be created for supplier related contract acceptance testing. These will be referenced in ASX's Testing Policy and ASX's vendor Management framework.	✔	✔	✔
6.6.1	**Recommendation: Ensure ASX Trade included in next annual ITDR exercise**	Recommendation has been partially addressed		
	ASX Action 1: Ensure ASX Trade included in next annual ITDR exercise	✔	✔	✔

Recommendation 1.2.1: Ensure Line 2 resource expertise

Recommendation Review Summary	Executed	Appropriate	Sustainable
ASX Action 1	✔	✔	✔
ASX Action 2	✔	✔	✔
ASX Action 3	✔	✔	✔
Recommendation Addressed?	Partially		
Comment	This recommendation has been largely closed with the actions conducted to date. While the ASX has appropriately identified the need for an additional Line 2 resource and implemented this Recommendation, at the time of writing this report, ASX has not exercised an ongoing process to evaluate Line 2 Risk coverage and capability. As a result, we are marking the sustainability of this item as "Partially Met" until such time that we can confirm that governance around Line 2 Risk coverage and capability has been exercised. EY will include the completion of this "Partially Met" item in its scope for subsequent reviews.		

Background/Tasks

Ensure that ERM Line 2 resources assigned to projects have sufficient expertise such that they can provide adequate oversight and challenge to the project. Post the Project Risk Assessment (PRA) exercise, a suitable ERM Line 2 expert or set of experts should then be assigned to the project, based upon the detailed understanding of the scope.

ASX Actions

1. A new Senior Manager, Enterprise Risk Management will be recruited to be the Line 2 representative on P1 and/or high-risk projects (excluding CHESS)
2. Post the PRA, the Sponsor and the CRO will attest that appropriate expertise for Line 2 challenge is available
3. Review the current Expectations of Line 2 on PSGs documentation

Findings

ASX Action 1:

Following the recommendation, ASX has recruited a new Senior Manager to join the Enterprise Risk Management space to be the Line 2 representative on P1 and high-risk projects. Additionally, the Enterprise Project Management Office (EPMO) has also hired a new senior risk specialist to be responsible from a project risk perspective (Line 1).

ASX explained the recruitment of the additional resources (Line 1 and Line 2) was to bolster up their resources and mitigate the risk of having any future Line 2 resourcing constraints. With the recruitment of these new resources, ASX advised that they are unable to foresee any resourcing issues in the next 12-24 months for Line 2 representatives on P1 and high-risk projects. The risk resources will have close liaison with the pipeline for what is coming up for P1 and high-risk projects.

ASX Action 2:

The Enterprise Project Risk Management framework (EPRMf) on the Confluence site states that all projects must complete a Project Risk Assessment to establish a risk rating. ASX has made an update to the EPRMf under section 1 'Project Risk Assessment' in the first line of point 1, specifically pointing out that the Project Risk Assessment (PRA) is performed during 'Define & Plan' phase and thereafter the PRA is completed every 6 months. Unless the go-live is within the 6 months

Outlook Email	Email sent to PM community to communicate/announce the change	24/01/2022

period, then the implementation readiness is used as the formal risk assessment step. The second paragraph of the same section highlights the mandatory requirement for P1 and high-risk projects to engage a Line 2 expert and introduces the need to complete an attestation that appropriate expertise for Line 2 challenge is available.

ASX has also added a new section titled 'How to engage the Line 2 Enterprise Risk Management (ERM) team' to explicitly clarify how to invite ERM Line 2 in 'good time' per their requirements.

Under the 'New Project Space Template' page on Confluence, ASX has introduced a 'ERM Attestation Template' child page, to show evidence of having the CRO and Project Sponsor formally reviewing the alignment of skillset and experience whilst considering availability and capacity. New project Confluence templates will come with the standard attestation template, and existing projects with a required assigned Line 2 representative will need to request adding of the attestation from EPMO.

ASX Action 3:

The Enterprise Risk Management SharePoint contains resources for Line 2 representatives, including the 'Guidance for Line 2 on Projects Risk Governance', found under the Enterprise Risk Management Framework. This document has been reviewed, formalised, and updated by Line 2 representatives to highlight the expectations of Line 2.

ASX Action(s) update Communication Log:

Channel	Description	Date
Project Management Framework Update Meeting	Introduction to Project Management community on attestation of Line 2 expertise and availability	January 2022
Blog Post	Blog post on Delivery Framework homepage to support previous communications	21/01/2022

Recommendation 1.2.4: Enhance controls re PRA and Process-RA mapped to risk register

Recommendation Review Summary	Executed	Appropriate	Sustainable
ASX Action 1	✔	✔	✔
ASX Action 2	✔	✔	✔
Recommendation Addressed?	Yes		
Comment	Recommendation has been addressed, as evidenced by the findings outlined below. ASX Actions are deemed appropriate and sustainable at the present time.		

Background/Tasks

Update the necessary policies to ensure that the risks highlighted in the Project Risk Assessment are transferred to the delivery risk register. This is also relevant to the Process Risk Assessment exercise.

ASX Actions

1. Update EPRM framework and the Project Risk & Issues Management framework to require that risks are transferred to the RAID register
2. Update the Expectations of Line 2 on PSGs documentation to include this as an advice/challenge topic

Findings

Action 1:

Under the EPRM framework, section titled 'It is mandatory for Projects at ASX to complete 3 staged Enterprise Risk Assessments throughout the Project lifecycle' has been updated by ASX to include new content explicitly requiring that risks are transferred to the Jira RAID register

using the standard template, and duplicate reference contradictive of RACI removed.

Under the Project Risk & Issues Management framework, section titled 'Risk and Issue - Roles and Responsibilities' has been updated on direction that Project Owners should be accountable for PRA, Process Risk Assessment, and Implementation Readiness completion. It now explicitly references that it is the project manager's responsibility to transfer project delivery risk content from PRA & Process Risk Assessments and Busines Analyst's responsibility to transfer business process risk content from Process Risk Assessments, with the involvement of the Project Manager. This has also been updated on the ASX Delivery Framework on the Confluence site.

Section titled 'Risk and Issue Management – Workflow' has been updated to include Jira RAID requirement to workflow guidance section of the framework.

Action 2:

The 'Guidance and Expectations for Line 2 on Project Governance' document stored on the Enterprise Risk Site has been updated by Line 2 representatives to incorporate advice from ASX Action 1.

Under section 1 'Project Risk Assessment', comment '*Are all identified risks appropriately captured in the JIRA RAID register?*' has been included.

Under section 2, 'Process Risk Assessment, comment '*Are all identified risks appropriately captured in the JIRA RAID register?*' has been included.

Under section 4 'Other Activity', comment '*Make sure all relevant risks from both project risk assessment and process risk assessment exercises are transferred to and managed within a project RAID register. Note, risks identified from other sources such as governance functions meetings and minutes, design authority, delivery team stand-ups, and*

independent teams (including ERM, EC and Internal Audit) should also be recorded in the RAID register' has been included.

ASX Action(s) update Communication Log:

Channel	Description	Date
October Project Delivery Project Managers Monthly Meeting	Message/announcement of the change to PM community	October 2021
Outlook Email	Message/announcement of the change to ERM & Enterprise Compliance community	27/10/2021
Blog Post	Blog post after Project Managers meetings to support the presentation and discussion	1/11/2021
Outlook Email	Email sent to PM community to communicate/announce the change	8/11/2021

Recommendation 1.3.1: Update policy to ensure PRA and Process-RA performed frequently

Recommendation Review Summary	Executed	Appropriate	Sustainable
ASX Action 1	✔	✔	✔
ASX Action 2	✔	✔	✔
Recommendation Addressed?	Yes		
Comment	Recommendation has been addressed, as evidenced by the findings outlined below. ASX Actions are deemed appropriate and sustainable at the present time.		

Background/Tasks

Update the necessary policies to ensure that the Project Risk Assessment and Process Risk Assessment are revisited at key points in the delivery project, as this will provide an additional set of risk identification dimensions that may have been omitted by the delivery team.

ASX Action(s)

1. The EPRM framework will be updated to require that the PRA is done semi-annually through a project's life (note that this decision was taken in Jan 2021)
2. The EPRM framework will be updated to require that the Process Risk Assessment is considered at multiple times through the project and that is suitable for this risk management task

Findings

ASX Action 1:

ASX has updated the EPRM framework on the Confluence site, under section 1 'Project Risk Assessment', to specifically point out that the

Project Risk Assessment (PRA) is performed during the Define & Plan Phase, and then completed again every 6 months after. The requirement was a recommendation at the executive level before the IBM recommendations review, to ensure that the PRA stays relevant as things change in projects. However, if the project's go-live is within the 6 months period, then the implementation readiness is used as the formal risk assessment review.

ASX Action 2:

ASX has retitled the 'Process Risk Assessment' to 'Business Process Risk Assessment'.

ASX has updated the EPRM framework on the Confluence site, under section 2 'Business Process Risk Assessment', to specifically point out that the Business Process Risk Assessment is performed during the 'Refine' phase and thereafter, must be reviewed/redone based on certain triggers and their impacts. Subject Matter Experts must be involved in any revisions of the Business Process Risk Assessment.

ASX Action(s) update Communication Log:

Channel	Description	Date
Project Delivery Team Meeting Pack	Communication to introduce the change and reinforce the framework intentions	December 2021
ASX Delivery Framework Blog Post	Communication to introduce the change and reinforce the framework intentions	17/12/2021
Outlook Email	Communication to introduce the change and reinforce the framework intentions	23/12/2021

Recommendation 1.3.2: Ensure risks identified and logged

Recommendation Review Summary	Executed	Appropriate	Sustainable
ASX Action 1	✔	✔	✔
ASX Action 2	✔	✔	✔
ASX Action 3	✔	✔	✔
Recommendation Addressed?	Yes		
Comment	Recommendation has been addressed, as evidenced by the findings outlined below. ASX Actions are deemed appropriate and sustainable at the present time.		

Background/Tasks

Ensure that risks are identified and logged from key sources, such as the Project Risk Assessment, Process Risk Assessment, Governance functions meetings and minutes, delivery team stand-ups, independent teams, ERM Line 2, Internal Audit/Line 3.

ASX Action(s)

1. Update the Project Risk & Issues Management framework to include this as a requirement
2. Update the Expectations of Line 2 on PSGs documentation to include this as a challenge topic
3. Create guidance note on RAID management (akin to Risk Champions guidance note)

Findings

ASX Action 1:

ASX has updated a section of the Project Risk & Issues Management framework (PRIMf) on the Confluence site, titled 'Risk and Issue Management - Roles and Responsibilities', containing a table detailing key responsibilities for each participant.

ASX has updated the Project Manager/Delivery Manager/SCRUM Master role responsibilities to explicitly reference the Project Manager is responsible for transfer risk content from 'key sources'.

Under section titled 'Risk and Issue Management - Workflow', in Process Steps section '2. Identify Risk & Issues and Evaluate', ASX have added an explicit requirement to log risks from 'key sources' as part of Jira RAID workflow guidance in bullet points 2 and 3.

ASX Action 2:

ASX has updated 3 sections of the 'Guidance for Line 2 on Project Risk Governance' document to include supporting statements to challenging that risks are identified and logged. The updates made were:

- In row section 1. Project Risk Assessment, 6th bullet point under the heading 'Risk/issue identification, assessment and management'
- In row section: Other activity, 1st bullet point under the heading 'Escalation & Reporting'
- In row section: Other activity, 2nd bullet point under the heading 'Alignment to Enterprise Project Risk Management Framework'

ASX Action 3:

Guidance for RAID Management is available and accessible from the ASX Delivery Framework on the Confluence site. All guidance related to Project RAID management is available from the Delivery Risk Management Confluence Pages (as opposed to a separate guidance note).

This site already existed and has been updated by ASX to reflect ASX Actions taken as per ASX Action 1 for Recommendation 1.3.2, documented above.

ASX Action(s) update Communication Log:

Channel	Description	Date
Monthly PM Meeting	Introduction to Project Management community	October 2021
ASX Delivery Framework Blog Post	Blog post on Delivery Framework homepage to support previous communications	1/11/2021
Outlook Email	Email sent to PM community to communicate/announce the change	8/11/2021

Recommendation 1.3.3: Ensure project RAID shared with PSG

Recommendation Review Summary	Executed	Appropriate	Sustainable
ASX Action 1	✔	✔	✔
ASX Action 2	✔	✔	✔
ASX Action 3	✔	✔	✔
ASX Action 4	✔	✔	✔
ASX Action 5	✔	✔	✔
ASX Action 6	✔	✔	✔
Recommendation Addressed?	Yes		
Comment	Recommendation has been addressed evidenced by findings outlined below. ASX Actions are deemed appropriate and sustainable at the present time.		

Background/Tasks

Ensure that the full project risk and issue log metrics are shared with the governance functions - e.g., number of open risks, number of risk owners, number of risks in delivery vs risks in change, categorisation of risks (e.g., how many are strategic vs delivery, how many are infrastructure vs personnel, how many are supplier versus in-house) in addition to the key risks that the project team deem material.

ASX Actions

1. Include as a topic of discussion in the Risk culture and awareness short and long term education session in response 1.1.1-2
2. Update the Expectations of Line 2 on PSGs to challenge on this topic
3. Create guidance note on RAID management (akin to Risk Champions guidance note)
4. Define standard reporting requirements
5. Enhance existing RAID dashboards
6. Create guidance note on risk reporting at PSGs

Findings

ASX Action 1:

ASX delivered 3 training sessions in December 2021 to highlight and uplift the visibility and awareness of risk management and its relationship to governance. One session was delivered to ASX board members and the other 2 sessions were delivered to ASX Project Sponsors, Owners and PM's involved in P1 and High-Risk Projects, plus any other identified stakeholders.

As part of their response to recommendation 1.1.1, which is due for the July 2022 review, they have included action ASX Actions to:

I. Update policies to include special focus on risk culture and awareness in projects
II. Provide both short term and long-term staff education on topic of Risk Culture

ASX Action 2:

ASX updated the 'Guidance for Line 2 on Projects Risk Governance' document under section titled 'Other Activity', sub section 'Escalation and Reporting', to include text highlighting that ERM Line 2 representative will challenge on the topic of risk metrics and transparency of risks to governance forums. on the topic of risk metrics and transparency of risks to governance forums.

ASX Action 3:

This activity has been addressed as part of the ASX action undertaken in Recommendation 1.3.2 - ASX Action 3

Additionally, in 2 locations of the Confluence site, ASX completed the following:

I. Drop down section: Risk & Issue Management – Workflow, Process Step 1 – Removed instructions for PMs to create risk dashboards (as there is a risk of incorrect metrics being included in governance forums), replaced with the EPMO taking on the role of creating the standard risk dashboard
II. Added link at bottom of Confluence page: RAID Setup and Management

ASX Action 4:

ASX made updates to the Confluence page titled 'Project / Small Change Health Monitoring & Reporting' to specifically highlight risk reporting for the following:

- Project Level Reporting
- Portfolio Level Reporting
- Enterprise Wide (PGG) Reporting
- Audit & Risk Committee (ARC)
- ASX Group Report

Additionally, Project Governance guidelines were reviewed and updated by ASX as part of ASX Action 1 of Recommendation 2.1.4.

ASX Action 5:

The ASX Enterprise Delivery RAID dashboards were standardised and enhanced with additional metrics and guidance on how to interpret the information in the dashboards. New Jira dashboards were also provided as part of a separate ASX action.

ASX Action 6:

On the 'ASX Delivery Governance' Confluence page, ASX have a section dedicated to 'Risk & Issue Dashboard Guidance' which provides guidance on how to prepare and use the dashboard for reporting and governance forums.

The section 'Governance Forums – Purpose & Roles' and its sub-sections (Strategic Governance Group (SGG), Portfolio Working Group (PWG) and Portfolio Governance Group (PGG)) were also updated to include the responsibilities of each forum. This provides guidance on how to access relevant issue and risk data for each forum and linkage to guidance on how to use and interpret. Additionally, specific risk and issue responsibilities were added to Project Sponsor, Delivery Manager and Project Manager roles.

ASX Action(s) update Communication Log:

Channel	Description	Date
Outlook Email	Email sent to PM community and project stakeholders to communicate/announce the change	23/12/2021
ASX Delivery Framework Blog Post	Blog post in January on Delivery Framework homepage	21/01/2022
Project Management Framework Update Meeting	Introduction to Project Management community and project stakeholders	January 2022

Recommendation 1.3.5: Ensure ERM Line 2 included in timely manner

Recommendation Review Summary	Executed	Appropriate	Sustainable
ASX Action 1	✔	✔	✔
ASX Action 2	✔	✔	✔
ASX Action 3	✔	✔	✔
Recommendation Addressed?	Yes		
Comment	Recommendation has been addressed evidenced by findings outlined below. ASX Actions are deemed appropriate and sustainable at the present time.		

Background/Tasks

Ensure that the ERM Line 2 function (could be more than one person) are invited by the project delivery team in good time, ideally contributing in the preparation workshops, business case production and project risk assessment exercises.

ASX Action(s)

1. Include as a topic of discussion in the Risk culture and awareness short and long term education session in response 1.1.1-2
2. Update the EPRM framework to include this as a requirement
3. Update the Expectations of Line 2 on PSGs document to make this a requirement that is escalated to the Sponsor and CRO if not met

Findings

ASX Action 1:

This activity has been addressed as part of the ASX action undertaken in ASX Action 1, Recommendation 1.3.3

ASX Action 2:

ASX have updated their Enterprise Project Risk Management framework (EPRMf) to include new section titled 'How to engage the Line 2 Enterprise Risk Management team' and a new section titled 'It is mandatory for Projects at ASX to complete 3 staged Enterprise Risk Assessments throughout the Project lifecycle'.

EPMO has introduced a new step in their project initiation activities called the "Project Initiation Workshop (PIW)", which takes place before any project is started to ensure the core project team is aware of the expectations of them in terms of mandatory processes, standards, compliance with reporting etc. A key area covered is "Project Risk Management", and projects that are P1 or high-risk following the outcome of the Project Risk Assessment (PRA), are reminded to involve Line 2 as a mandatory requirement. Non-P1 or high-risk projects are encouraged to engage Line 2 if they require any support in the risk space.

ASX Action 3:

ASX have updated the "Guidance for Line 2 on Projects Risk Governance" document to include introduction paragraph, which explicitly states that all P1 and high projects are required to engage Line 2 representation at the Strategic Guidance Group (SGG) and Executive Steering Group (ESG) forums.

In a separate section titled "Other activity", they have updated to include a point that Line 2 are to be invited to relevant forums and failure to do so will require escalation to Project Sponsor and CRO. ASX have shown that they have the processes in place if an escalation were to occur and EY do not believe it is reasonable to assume an escalation will be required or witnessed in the near future to justify holding this in a "Partially Met" state indefinitely.

ASX Action(s) update Communication Log:

Channel	Description	Date
Meeting	Monthly PM Meeting - Introduction to Project Management community on when and how to engage Line 2	October 2021
Blog Post	Blog post in November on Delivery Framework homepage accessible as historic blog post	1/11/2021
Outlook Email	Email sent to PM community to communicate/announce the change	8/11/2021

Recommendation 1.3.9: Ensure RAID reported to PSG and tracked for closure

Recommendation Review Summary	Executed	Appropriate	Sustainable
ASX Action 1	✔	✔	✔
ASX Action 2	✔	✔	✔
ASX Action 3	✔	✔	✔
ASX Action 4	✔	✔	✔
Recommendation Addressed?	Yes		
Comment	Recommendation has been addressed evidenced by findings outlined below. ASX Actions are deemed appropriate and sustainable at the present time.		

Background/Tasks

Ensure that project risks, issues and statistics are tracked to completion and reported to governance functions in a timely fashion – e.g., average time to close issues, longest open issue, ownership quantities, number of open risks.

ASX Action(s)

1. Include as a topic of discussion in the Risk culture and awareness short and long term education session in response 1.1.1-2
2. Define standard project risk reporting requirements and develop dashboards
3. Create PSG Sponsor and member guidance note covering reporting requirements
4. Update the Expectations of Line 2 on PSGs document to challenge on this concept

Findings

Findings have been addressed as part of the ASX action undertaken in Recommendation 1.3.3.

Recommendation 1.3.10: Quantify risks using ASX standard methods (likelihood/impact)

Recommendation Review Summary	Executed	Appropriate	Sustainable
ASX Action 1	✔	✔	✔
ASX Action 2	✔	✔	✔
ASX Action 3	✔	✔	✔
ASX Action 4	✔	✔	✔
Recommendation Addressed?	Yes		
Comment	Recommendation has been addressed evidenced by findings outlined below. ASX Actions are deemed appropriate and sustainable at the present time.		

Background/Tasks

Project risks should be quantified in likelihood and impact terms, according to standard definitions of risk assessment.

ASX Action(s)

1. Review the project risk scalars (these were updated on 5th may and signed off by the CRO)
2. Include as a topic of discussion in the Risk culture and awareness short and long term education session in response 1.1.1-2
3. Create Sponsor and PSG member guidance document
4. Update the Expectations of Line 2 on PSGs document to challenge on this concept

Findings

ASX Action 1:

Under the Delivery Risk Management Confluence Pages, drop down section titled 'Risk & Issue Management – Workflow' and sub-section

'Project Risk Scaler', Process Step 6 (Project Risks and Issues) and Process Step 7 (Review and Resolve Escalated Risks and Issues) were reviewed by ASX. Under drop down section 'Risk & Issue Management - Reporting' and sub section 'Meeting and Frequency', 2nd sentence and subsequent bullet points were reviewed.

Project Risk Scalars were reviewed by ASX during 2021, with sign-off received from CRO in Ma y2021. The risk scalers remain relevant.

ASX Action 2:

This activity has been addressed as part of the ASX action undertaken in ASX Action 1, Recommendation 1.3.3

ASX Action 3:

This activity has been addressed as part of the ASX action undertaken in ASX Action 6, Recommendation 1.3.3

ASX Action 4:

In the 'Guidance for Line 2 on Project Risk Governance' document, ASX has updated wording to highlight that ERM Line 2 representative '*will challenge on the topic of completeness and adequacy of project risk assessment attributes*', impact & likelihood under the first bullet point of section titled '1. Project Risk Assessment' and sub-section 'Risk/Issue Identification, Assessment and Management'.

ASX Action(s) update Communication Log:

Channel	Description	Date
Outlook Email	Risk Scaler Email announcements. Supporting message to project management community	8/06/2021
Blog Post	Blog post in June on Delivery Framework homepage	1/06/2021

| Meeting | Updates to Project Management Framework Meeting. Restatement of project risk scalars | January 2022 |

Recommendation 2.1.1: Document PSG roles/responsibilities based on risk & include independence

Recommendation Review Summary	Executed	Appropriate	Sustainable
ASX Action 1	✔	✔	✔
Recommendation Addressed?	Yes		
Comment	Recommendation has been addressed evidenced by findings outlined below. ASX Actions are deemed appropriate and sustainable at the present time.		

Background/Tasks

Document the key roles and functions that must be in attendance of a governance function, based on the risk, complexity, priority and needs of the project. In addition, include roles independent from the project and ideally the organisation

ASX Action(s)

1. Review existing Project Governance guidelines and update to ensure clear purpose and roles and responsibilities of governance forum membership

NB: The need for engagement of independent roles will be defined as part of the Project Assurance Framework

Findings

ASX Action 1:

ASX has reviewed their Project Governance guidelines under sections of the 'ASX Delivery Governance' Confluence page and made updates accordingly.

Amendments were made to Governance Structure of groups, authorities and committees, linkage between those and up to Board. Amendments were also made to the purpose and roles of the governance forums. Standardised Terms of Reference templates for SGGs and PWGs have been provided for all projects to use.

ASX Action(s) update Communication Log:

Channel	Description	Date
Meeting	Introduction to Project Managers, Delivery Managers and those participating in project governance	January 2022
Blog Post	Blog post in January on Delivery Framework homepage	21/01/2022
Outlook Email	Email sent to PM community, sponsors, owners, and other key project stakeholders to communicate/announce the change	24/01/2022

Recommendation 2.1.2: Evaluate if PSG needs member criteria re independence

Recommendation Review Summary	Executed	Appropriate	Sustainable
ASX Action 1	✔	✔	✔
ASX Action 2	✔	✔	✔
Recommendation Addressed?	Yes		
Comment	Recommendation has been addressed evidenced by findings outlined below. ASX Actions are deemed appropriate and sustainable at the present time.		

This activity has been addressed as part of the ASX action undertaken in ASX Action 1, Recommendation 2.1.1

Background/Tasks

Evaluate the need to update the necessary policies to require an independent viewpoint, that the delivery team and its reporting line cannot exceed a given percentage of the total governance function membership.

ASX Action(s)

1. Line 2 ERM to be allocated to all P1 or high-risk project PSGs (Refer Recommendation 1.2.1)
2. Composition of project governance forums will be reviewed as part of Recommendation 2.1.1

Findings

ASX Action 1:

Findings have been addressed as part of the ASX action 1 undertaken in Recommendation 1.2.1

ASX Action 2:

Recommendation 2.1.3: Evaluate if P1 and/or High-risk projects need dedicated PSG

Recommendation Review Summary	Executed	Appropriate	Sustainable
ASX Action 1	✔	✔	✔
Recommendation Addressed?	Yes		
Comment	Recommendation has been addressed evidenced by findings outlined below. ASX Actions are deemed appropriate and sustainable at the present time.		

Background/Tasks

Evaluate the need to update the policies to require that for Priority 1 and High-Risk projects key governance functions have dedicated meetings that only cover the project.

ASX Action(s)

1. Update the Project Governance section of the ASX Delivery Framework to reflect this

Findings

ASX Action 1:

The ASX team has updated and distributed to stakeholders document "ASX Delivery Governance" and updated requirement for project dedicated SGG (Strategic Guidance Group) forum for P1 And High-risk Projects session, which positions purpose and Governance. The forum SGG was deemed mandatory for those projects.

For clarification purposes, the acronym "PSG" is an IBM terminology, and the ASX equivalent of the forum is called SGG and outlined in the above ASX Action change.

ASX Action(s) update Communication Log:

Channel	Description	Date
Meeting	October Project Delivery Project Managers Monthly Meeting. Message/announcement of the change to PM community	October 2021
Blog Post	Blog post in November on Delivery Framework homepage	1/11/2021
Outlook Email	Email sent to PM community to communicate/announce the change	8/11/2021

Recommendation 2.1.4: Update policies to require PSG monitors against defined success metrics

Recommendation Review Summary	Executed	Appropriate	Sustainable
ASX Action 1	✔	✔	✔
Recommendation Addressed?	Yes		
Comment	Recommendation has been addressed evidenced by findings outlined below. ASX Actions are deemed appropriate and sustainable at the present time.		

Background/Tasks

Update the policies such that the governance forums check that the project is tracking and reporting against the metrics defined at project initiation.

ASX Action(s)

1. Review and update the Project Governance guidelines to ensure expectations regarding project tracking and reporting are clearly outlined

Findings

ASX Action 1:

ASX reviewed and updated the following Project Governance Guidelines:

- Project Initiation Workshop Guidance
- Project Initiation Workshop Template
- Project Domain Health Monitoring & Reporting Guidance
- Standard Project Reporting: How to Guide
- Project Status Report PDF and Project Status Report Setup

Documentation updates included standard project metric reporting requirements, initiation workshop checklists, templates adapted with the ASX Delivery Framework standards and updates/ changes were communicated to Delivery Managers, Project managers, Project sponsors and Project owners, as well as communicated during all inflight P1 Project's SGG Forums (Strategic Guidance Group).

ASX Action(s) update Communication Log:

Channel	Description	Date
Blog Post	Blog post in December on Delivery Framework homepage	17/12/2021
Meeting	Project Delivery Team Meeting to introduce the change and reinforce the framework intentions	22/12/2021
Outlook Email	Email sent to Delivery Team after team meeting	23/12/2021

Recommendation 3.1.2: Checklist to increase scope of lessons learned from PIRs

Recommendation Review Summary	Executed	Appropriate	Sustainable
ASX Action 1	✔	✔	✔
ASX Action 2	✔	✔	✔
Recommendation Addressed?	Yes		
Comment	Recommendation has been addressed evidenced by findings outlined below. ASX Actions are deemed appropriate and sustainable at the present time.		

Background/Tasks

Produce a due diligence checklist to increase scope of coverage and to capture material lessons learned.

ASX Actions

1. Complete the Lessons Learnt Framework and Repository Refresh
2. Introduce Mandatory Requirement to review Lesson Learnt Repository as part of the 'Define & Plan' stage of the Project Lifecycle

Findings

ASX Action 1:

ASX has updated the 'Lessons Learnt & Lesson Actions' section on the Confluence site under the section 'Guidelines to LLR Dashboards'. Updates were made to the process for collating, reviewing, and tracking lessons learnt and lesson actions, to address lessons learned from PIRs (Project Initiation Requirements).

Additionally, ASX has created new Lessons Learnt dashboards in Jira with previous lessons learnt reviewed and updated to the new categories and capabilities.

ASX Action 2:

ASX has updated the ASX Delivery Framework with a new Pre-Project Deliverable 'Project Initiation Workshop' in the 'Prioritisation & Selection' phase of ASX's project lifecycle. This is a mandatory step supports the initial set-up process to complete the Concept Approval (for seed funding)/ Business Case for the initiative and involves the review and extract of lessons learnt from the lessons learnt repository to populate in the 'Project Initiation Assessment' form.

The 'Project Initiation Workshop' is triggered independently by the EPMO (Enterprise and Project Management Office) and CaDE (Change and Delivery Enablement) team once a proposal has been selected by the Executive Committee as an initiative that will be funded.

As noted in the 'Project Initiation Assessment' form, the lessons learnt relevant for the project will be captured in the workshop and the PM will prepare a formal lesson learnt overview for SGG (Strategic Guidance Group) review and discussion.

ASX Action(s) update Communication Log:

Channel	Description	Date
Meeting (July)	Dedicated time within Project Delivery Monthly meeting to delivery and inform on the Lessons Learnt changes	28/07/2021
Meeting (September)	September Project Delivery Project Managers Monthly Meeting - Verbal update and production screen demonstration	22/09/2021

Blog Post	Blog post in October on Delivery Framework homepage	1/10/2021
Meeting (October)	October Project Delivery Managers Monthly Meeting - Formal communication of changes	27/10/2021
Outlook Email	Email sent to PM community to communicate/announce the change	8/11/2021

Recommendation 3.1.3: Update policy – require PIR lessons learned considered at project initiation

Recommendation Review Summary	Executed	Appropriate	Sustainable
ASX Action 1	✔	✔	✔
ASX Action 2	✔	✔	✔
Recommendation Addressed?	Yes		
Comment	Recommendation has been addressed evidenced by findings outlined below. ASX Actions are deemed appropriate and sustainable at the present time.		

Background/Tasks

Update the project delivery process and policies to require that prior Post Implementation Reviews\Lessons Learned are considered, especially in the initiation phases of the project.

ASX Actions (As per 3.1.2)

1. Complete the Lessons Learnt Framework and Repository Refresh (currently in progress)
2. Introduce Mandatory Requirement to review Lesson Learnt Repository as part of the 'Define & Plan' stage of the Project Lifecycle

Findings

Findings have been addressed as part of Recommendation 3.1.2.

Recommendation 3.1.4: Update policy – EPMO involved from initiation in P1 projects

Recommendation Review Summary	Executed	Appropriate	Sustainable
ASX Action 1	✔	✔	✔
Recommendation Addressed?	Yes		
Comment	Recommendation has been addressed, as evidenced by the findings outlined below. ASX Actions are deemed appropriate and sustainable at the present time.		

Background/Tasks

Update the project delivery process and policies to require that for priority 1 projects the Enterprise Project Management Office (EPMO) team is directly involved from initiation in establishing, for example, the delivery framework, reporting, risk/issues register, financial management systems.

ASX Action(s)

1. A step will be introduced into the Initiation stage of the Delivery Framework that outlines who and how to engage EPMO to ensure standard tooling setup

Findings

ASX Action 1:

At the initiation of all projects (P1, 2, 3), the EPMO team will proactively set up standard project Confluence spaces (and file directories), RAID registers and Financial Budget setup. The EPMO also provides written guidance for standard project Risk, Issue & Assumption Dashboard setup to Project Managers. Associated EPMO processes are documented and there is a checklist to ensure all projects are set up in the same way.

Following the IBM recommendation, the EPMO have now formalised the initial setup process and communicated to the Delivery Team to introduce the change and reinforce the framework intentions as evidenced in the communication log below. Within the ASX Delivery Framework on Confluence under 'Prioritisation & Selection / Deliverables Pre Project', ASX have added a new link on who and how to engage for standard tooling setup.

A new child page from the ASX Delivery Framework has also been added summarising the guidance on when, who and how to engage EPMO for project tooling setup.

ASX Action(s) update Communication Log:

Channel	Description	Date
Blog Post	Blog post in October on Delivery Framework homepage	17/12/2021
Meeting	Project Delivery Team Meeting to introduce the change and reinforce the framework intentions	22/12/2021
Outlook Email	Email sent to Delivery Team after team meeting	23/12/2021

Recommendation 3.2.4: Consider policy update so that P1 or High risk project PSGs meet fortnightly

Recommendation Review Summary	Executed	Appropriate	Sustainable
ASX Action 1	✔	✔	✔
ASX Action 2	✔	✔	✔
ASX Action 3	✔	✔	✔
Recommendation Addressed?	Yes		
Comment	Recommendation has been addressed evidenced by findings outlined below. ASX Actions are deemed appropriate and sustainable at the present time.		

Background/Tasks

Consider enhancing the policies such that for Priority 1 and Medium/High Risk projects, governance related reporting frequency is increased to every 2 weeks. In addition, consider the move to a dynamic dashboard-style reporting rather than document-based.

ASX Action(s)

1. Investigate and determine appropriate PSG meeting frequency for P1 or high risk projects
2. Include this as a requirement in the Governance guidelines of the ASX Project Management Framework
3. See 1.3.9 point 2 (*Define standard project risk reporting requirements and develop dashboards*)

Findings

ASX Action 1:

All P1 and high-risk projects must have a SGG and these are required monthly at a minimum. Project Status Reports are required to be completed fortnightly for all projects and there is extended reporting when a project is classified as P1 or high risk. Guidance on potential reasons for why governance forums may need to be increased is found under the 'ASX Delivery Governance' page in the Confluence site.

ASX Action 2:

ASX has updated the section titled 'Governance Forums – Purpose & Roles' on the Confluence site by adding new content under 'Strategic Guidance Group (SGG) – Cadence'. This section sets out minimum requirement and circumstances when increased frequency should be considered.

ASX Action 3:

This activity has been addressed as part of the ASX action undertaken in ASX Action 4 & ASX Action 5, Recommendation 1.3.3, and See Findings section for ASX Action 1, Recommendation 2.1.4

ASX Action(s) update Communication Log:

Channel	Description	Date
Meeting	Project Management Framework Update Meeting	January 2022
Blog Post	Blog post in January on Delivery Framework homepage	21/01/2022
Outlook Email	Email sent to PM community and project stakeholders to communicate/announce the change	24/01/2022

Recommendation 3.2.6: Update policy so that P1 projects run by in-house Project Manager

Recommendation Review Summary	Executed	Appropriate	Sustainable
ASX Action 1	✔	✔	✔
ASX Action 2	✔	✔	✔
Recommendation Addressed?	Yes		
Comment	Recommendation has been addressed, as evidenced by the findings outlined below. ASX Actions are deemed appropriate and sustainable at the present time. Although the action indicate it is a preference for P1 projects to be run by an internal PM, within the documents we note that there is an exception process for when an external PM is required.		

Background/Tasks

Update the policies such that Priority 1 projects are required to be run by in-house project managers who have detailed knowledge of the ASX delivery processes, procedures, and tools. If this is not viable, then an EPMO member should be accountable for compliance to the project delivery processes.

ASX Action(s)

1. The Enterprise Project Management framework will be updated to list this as a preference where possible. If this is not possible nor sensible then this will be included in the business case for PGG noting.
2. The Sponsor with assistance from the Project Assurance Specialist will then be accountable for compliance with project delivery practices.

Findings

ASX Action 1:

ASX has updated the Enterprise Project Management framework to include preference for P1 projects to be run by in-house project managers who have detailed knowledge of the ASX delivery processes, procedures, and tools. In the case where this is not possible, as there are no suitable internal resources, then an 'exception note' for allocating an external project manager is required to be submitted as part of the business case for consideration and approval. This is captured as part of the Business Case template.

ASX Action 2:

Under the 'Key Roles & Responsibilities' section of the Enterprise Project Management framework on the Confluence site, ASX has added a 'Project Assurance Specialist' role and described its responsibility under 'Other Project Roles' section in the roles table. ASX states the Project Assurance Specialist will be 'responsible for the definition, development, embedding and execution of the ASX Project Assurance Framework'.

In the same roles table, ASX states that one of the responsibilities of the Project Sponsor is to 'ensure project delivers the intended quality, value and benefits'.

ASX Action(s) update Communication Log:

Channel	Description	Date
Meeting	Project Management Framework Update Meeting - Introduction to PM community on attestation of Line 2 expertise and availability	January 2022

Blog Post	Blog post in January on Delivery Framework homepage	21/01/2022
Outlook Email	Email to PM Community to communicate/ announce changes	24/01/2022

Recommendation 3.2.7: Ensure that key Go-Live meetings docuemnted

Recommendation Review Summary	Executed	Appropriate	Sustainable
ASX Action 1	✔	✔	✔
Recommendation Addressed?	Yes		
Comment	Recommendation has been addressed evidenced by findings outlined below. ASX Actions are deemed appropriate and sustainable at the present time.		

Background/Tasks

Ensure that key go-live related meetings are minuted and ASX Actions are clearly documented.

ASX Action(s)

1. Enterprise Project Risk Management framework to be updated to reflect this requirement.

Findings

ASX Action 1:

ASX has updated the Enterprise Project Risk Management framework (EPRMf) on the Confluence site under the section titled 'It is mandatory for Projects at ASX to complete 3 staged Enterprise Risk Assessments throughout the Project lifecycle' to include the requirement that all go-live meetings for all projects are documented. The Go-live go/no-go meeting is the key meeting where the formal decision is made and where minutes from the meeting is required to be documented.

These changes were communicated to PM community as noted in the communications log below, and all new projects starting from November

2021 onwards (post this communication) have been set up with the standard project repository in Confluence, which includes the standard minutes template. Additionally, for all in-flight projects which have not reached the 'Embed, Review and Close' phases of the project lifecycle, ASX is currently in the process of retro-fitting the relevant standard project repository and will capture minutes as per requirement when they reach the go-live stage of the project lifecycle.

In the meeting with ASX (ASX Actions – Review of Recommendation 3.2.7), when asked how this process would be governed, ASX explained that the formal sign off of the "go recommendation" needs to be evidenced by the implementation readiness artefacts, which includes the go-live meeting minutes. ASX has provided evidence of go-live minutes being documented for several projects since the November 2021 communications and shown that the minutes have been stored in the appropriate location on the Confluence site.

ASX Action(s) update Communication Log:

Channel	Description	Date
Meeting	October Project Delivery Project Managers Monthly Meeting to announce the change to PM Community	27/10/2021
Outlook Email	Email sent to PM community to communicate/ announce change	08/11/2021
Blog Post	Blog post announcement on ASX Delivery Framework page	1/11/2021

Recommendation 4.1.1: ASX should maintain detailed requirements log to lessen reliance on single vendor

Recommendation Review Summary	Executed	Appropriate	Sustainable
ASX Action 1	✔	✔	✔
ASX Action 2	✔	✔	N/A
ASX Action 3	✔	✔	✔
Recommendation Addressed?	Yes		
Comment	Recommendation has been addressed evidenced by findings outlined below. ASX Actions are deemed appropriate and sustainable at the present time.		

Background/Tasks

ASX should maintain their own detailed requirements log to mitigate against over reliance upon a single vendor and in case ASX would ever need to change supplier. This log would provide a means to validate the vendors position and would be in addition to the test cases, documenting non-functional, process, integration as well as functional needs.

ASX Action(s)

1. Review the Enterprise Project Management framework on requirements definition for new projects, updating it to define which projects would require ASX to create/maintain a full requirement register in-house and at what level of detail.
2. Identify the next project that is likely to apply this issue to. ▆
▆▆▆▆▆▆▆▆
3. Consider whether to apply this retrospectively to ASX Trade or to await the next refresh to this

Findings

ASX Action 1:

ASX has updated the Enterprise Project Management Framework on the Confluence site, under the Business Analysis (BA) Framework which contains the guidelines on Detailed Business Requirements, Detailed Non-Functional Requirements and High-Level Requirements, and sign off procedures.

High Level Requirements are produced for all projects, regardless of whether the solution is out of the box or customised. At the project initiation, the Project Governance Committee looks at all the projects in the pipeline and determine what the right level of requirements is and what the appropriate level of testing would be.

ASX uplifted the BA Framework in May 2021 to include a new 'Vendor Engaged Delivery (VED)' assessment tool – tool used by Business Analysts (BAs) during the 'Define & Plan' phase to determine core deliverables required on vendor engaged projects depending on the nature of the change. As part of embedding the BA Framework, BAs are required to follow the BA Deliverable Assessment Process and use the Business Analysis Deliverable Assessment Form ▆▆▆▆ ▆▆▆▆▆▆▆▆▆▆▆ throughout the project lifecycle to ensure that all required deliverables are completed.

Furthermore, ASX have applied an audit mechanism, where at the end of a project, the BAs do a retrospective to reflect on whether the project was completed in the correct way and all copies of artefacts were collected to ensure autonomy from vendors if changes were required.

ASX Action 2:

ASX has assessed their upcoming pipeline of approved projects to commence in FY22 and identified three potential opportunities to apply the new updates in the BA Framework. They are:

At the appropriate time as the projects move through their lifecycle, the BA Framework and specifically applying the Vendor Engaged Delivery assessment, will assist in determining the need for detailed requirements gathering for packaged software/application implementations.

ASX Action 3:

ASX held discussions between key executive and senior stakeholders in October 2021 and on 26 November 2021, concluding that the critical releases for ASX Trade were completed and stable, so documentation of full requirements was not required to be done immediately. It was decided they would continue to review this decision and plan for requirements work as part of the planning for ASX Trade releases in the future, in line with the updated Enterprise Business Analysis Framework.

ASX Action(s) update Communication Log:

Channel	Description	Date
Meeting	BA monthly team meeting to communicate BA Framework updates with new Vendor Engagement Delivery Process	8/07/2021
Decision Capture	Pipeline assessment	22/11/2021
Decision Capture	Packaged software requirements for ASX Trade, decision to apply retrospectively	01/12/2021

Recommendation 5.1.1: Perform contract acceptance at end of project lifecycle

Recommendation Review Summary	Executed	Appropriate	Sustainable
ASX Action 1	✔	✔	✔
Recommendation Addressed?	Partially		
Comment	This recommendation has been largely closed with the actions conducted to date. While the ASX has appropriately identified the need for updating the Vendor Management framework and has shown clear intent and evidence to support this intent to implement their education program by the end of the financial year (FY22), it has not been completed to date. As a result, we are marking the sustainability of this item as "Partially Met" until such time that we can confirm that the training has been completed and embedded into an ongoing plan. EY will include the completion of this "Partially Met" item in its scope for subsequent reviews.		

Background/Tasks

Perform contract acceptance at the end of the project lifecycle, once integration and end-to-end testing have also been factored in. This would also increase the percentage of test cases and automated test cases available to execute with greater confidence. We note that this is subject to existing contractual terms and obligations, so may not always be possible.

ASX Action(s)

1. Update ASX's Vendor Management framework to require contract acceptance at the end of the project lifecycle once integration and end to end testing have been completed

Findings

ASX Action 1:

The 'ASX Vendor Management Framework' is documented on the Vendor Relationship Management SharePoint site. ASX has updated the 'ASX Vendor Management Framework' on pages 15 and 16, point a) of section 4.3.2 titled 'Key Contract Management activities include'. The updates are related to 'contract acceptance' and guidelines ensuring appropriate Deliverables, Contract Acceptance, Acceptance Criteria and Acceptance Testing are included in Statements of Work.

As noted in the ASX '5.1.1 Summary Consolidation Page' on Confluence, changes to be communicated to the relevant Tech and Data Contract Owners and Project Managers as part of the Vendor Management education program. In the meeting with ASX 'ASX Actions – Review of Recommendation 5.1.1', ASX explained that they currently have a high-level plan for the education program involving briefing sessions this financial year, however, have yet to confirm stakeholders, content, and dates.

ASX Action(s) update Communication Log:

N/A

Recommendation 5.1.2: Create guidelines for supplier contract acceptance testing

Recommendation Review Summary	Executed	Appropriate	Sustainable
ASX Action 1	✔	✔	✔
Recommendation Addressed?	Partially		
Comment	This recommendation has been largely closed with the actions conducted to date. While the ASX has appropriately identified the need for updating the guidelines for supplier contract acceptance testing, it has not been fully completed to date as only 14 out of 15 acceptance testing criteria have been completed. ASX will address the final acceptance testing criteria by June 2022. As a result, we are marking the execution of this item as "Partially Met" until such time that we can confirm that the minimum and expected targets (KPI) are included in the Actors testing session, EY will include the completion of this "Partially Met" item in its scope for subsequent reviews.		

Background/Tasks

Create guidelines for supplier related contract acceptance testing e.g., X% of the final functional and non-functional test cases must be available to start the process, e.g., Y% of functional and non-functional test cases must be automated.

ASX Action(s)

1. Guidelines will be created for supplier related contract acceptance testing. These will be referenced in ASX's Testing Policy and ASX's vendor Management framework.

Findings

ASX Action 1:

Guidelines created for supplier related contract acceptance testing, including standards and controls for vendors providing product releases to ASX and are a supplementary document to the ASX Vendor Management Framework.

ASX has drafted and introduced a new guideline document "ASX Vendor Quality Guideline Standards and Controls" ▓▓▓▓▓▓▓▓▓▓ ▓▓▓▓▓▓▓▓▓▓ ▓▓▓▓▓▓▓▓▓▓ ▓▓▓▓▓▓▓▓▓ .

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Guidelines have been released and documentation review is within 24 months.

ASX Action update Communication Log:

Channel	Description	Date
Outlook Email	ASX shared the final version of the document to the Team ▓▓▓▓▓▓▓ ▓▓▓▓▓▓▓ ▓▓▓▓	17/12/2021

Recommendation 6.6.1: Ensure the new ASX Trade refresh is included in next annual ITDR exercise

Recommendation Review Summary	Executed	Appropriate	Sustainable
ASX Action 1	✔	✔	✔
Recommendation Addressed?	Partially		
Comment	This recommendation has been largely closed with the actions conducted to date. While the ASX has appropriately identified the need for ASX Trade to be part of their ITDR and successfully executed a DR test ▓ ▓▓▓▓▓▓▓, they have also identified that DR testing is to be done on the ASX Trade platform every 12 months afterwards, with the next annual ITDR scheduled for ▓▓▓▓ ▓▓ As a result, we are marking the sustainability of this item as "Partially Met" until such time that we can confirm that the ITDR scheduled for ▓▓▓▓▓▓ has been executed as part of their ongoing plan. EY will include the completion of this "Partially Met" item in its scope for subsequent reviews.		

Background/Tasks

Ensure that the new ASX Trade Refresh project is prioritised for the upcoming annual ITDR (IT Disaster Recovery) exercise to increase confidence and reduce risk.

ASX Action(s)

1.   Ensure ASX Trade included in next annual ITDR exercise

Findings

ASX Action 1

In the document labelled 'Business Continuity Management (BCM) Exercise Summary' provided by ASX, it shows that ASX successfully executed an ITDR exercise for ASX Trade ▓▓▓▓▓▓▓▓▓ and have identified the need to perform a DR test for the ASX Trade platform every 12 months afterwards, with the next IDTR for ASX Trade ▓▓▓▓▓▓▓▓▓▓▓▓▓ – any changes to this date will require board approval. Additionally, ASX has provided a snapshot of their 'DR Test Schedule & Summary' online record from SharePoint, further confirming this.

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The 6.6.1 ASX Action was closed with 2 'problem tickets', and ASX has confirmed that one ticket has been closed and the remaining open ticket has one final ASX Action around strengthening controls around the updated Runsheet, which currently is being manually monitored until ASX Action is closed. ASX confirmed there is no business impact due to outstanding ASX Action and that task is completed.

ASX Action(s) update Communication Log:

N/A

Appendix A   Recommendation review workshops list

#	Date	Meeting Title
1	2/02/2022	ASX Actions - Review for Recommendations 3.1.2 & 3.1.3
2	2/02/2022	ASX Actions - Review for Recommendation 4.1.1
3	7/02/2022	ASX Actions - Review for Recommendation 1.2.4, 1.3.1, 1.3.2, 1.3.5 & 1.3.10
4	7/02/2022	ASX Actions - Review for Recommendation 5.1.1 *(5.1.2 removed from session, written response provided)*
5	8/02/2022	ASX Actions - Review for Recommendation 3.2.7
6	8/02/2022	ASX Actions - Review for Recommendations 3.1.4 & 3.2.6
7	8/02/2022	ASX Actions - Review for Recommendations 2.1.3 & 2.1.4
8	10/02/2022	ASX Actions - Review for Recommendations 1.2.1, 2.1.1 & 2.1.2
9	10/02/2022	ASX Actions - Review for Recommendation 6.6.1
10	10/02/2022	ASX Actions - Review for Recommendations 1.3.3, 1.3.9 & 3.2.4 *(Workshop not held, written response provided)*
11	24/02/2022	ASX IBM Recommendations: EY IE Draft Report Fact Check Review

Appendix B   Interviewed ASX stakeholders list

Role
Chief Risk Officer
Chief Customer and Operating Officer
Group Executive, Technology and Data and CIO
Group Executive, Markets
General Manager, Business Management and Delivery, Markets
General Manager, Enterprise Risk Management
General Manager, Enterprise Delivery
Head of Change & Delivery Enablement, Enterprise Delivery
Head of Testing, Quality Engineering & Testing
Senior Manager, Enterprise PMO, Enterprise Delivery
Senior Manager, Application Support, Markets Technology
Senior Manager, Enterprise Risk Management
Manager, Business Analysis, Markets
Manager, Vendor and Partner Relationships, Security & Governance
EPMO Lead, Enterprise Delivery
Project Manager, Enterprise Delivery

Appendix C Recommendations Questionnaire submitted to ASX post SMR documentation review

Appendix D   Documents reviewed

Appendix E   Recommendations to be re-presented by ASX in future quarterly reports

#	Recommendation Reference	Quarterly Report to be Re-presented	Outstanding Actions – To deem recommendation fully addressed
1	1.2.1 - Ensure Line 2 resource expertise	March 2022	Review of future PGG (Project Governance Group) packs to confirm that L2 resourcing requirements are outlined and evidently included during monthly PGG Forums.
2	5.1.1 - Perform contract acceptance at end of project lifecycle	June 2022	Sustainability question to be addressed by June with delivery of training.
3	5.1.2 - Create guidelines for supplier contract acceptance testing	June 2022	Full execution of this recommendation to be addressed by June quarterly report.
4	6.6.1 - Ensure ASX Trade included in next annual ITDR exercise	▆▆ 2022	Outstanding action to be closed once ITDR is carried out ▆▆▆▆

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