Agenda Item 5

## Technology Position – Issues Paper

---

Objective

The objective of this paper is to inform the Board's discussion at its June 2024 meeting on how to continue shaping the IAASB's Technology Position.

Introduction

Background

1.   The IAASB's Strategy and Work Plan For 2024–2027 (SWP 2024-2027) includes a commitment by the Board to develop a Technology Position in 2024 that addresses the impact of technology on the IAASB's standards, including the Board's vision and roadmap. The Technology Position will inform the Board's activities.

2.   A driver for this initiative is the accelerating pace of development of sophisticated technologies, including artificial intelligence (AI), and their increasing adoption by businesses and assurance practitioners, including auditors.[1] In response to these technological shifts, the IAASB recognizes the need to evaluate and potentially update its standards to ensure they remain effective and relevant across all types of engagements, not limited to audits (see Agenda Item 4 for the March 2024 meeting for more information).

3.   In March 2024, the Board endorsed the conceptual framework that is illustrated below to guide the development of its Technology Position.
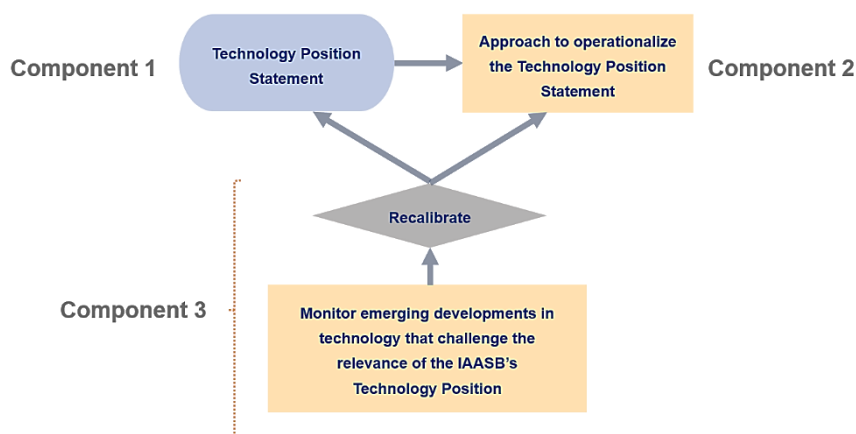
(a)   Component 1: Technology Position Statement. Previously referred to as the "Technology Posture," the Position Statement guides the Board's standard-setting activities regarding technology impacts, outlining principles and commitments to integrate technology into auditing and assurance standards. Refer to Section 2 for the proposed Position Statement.

---

[1]   In this paper, we use the term "auditors" to refer specifically to practitioners involved in financial statement audits, and "practitioners" to refer more broadly to those involved in assurance engagements, including audits.

(b)   Component 2: Approach to Operationalize the Position Statement. This component describes a proposed approach for how the Board will turn the principles from the Position Statement into concrete actions using tools like a gap analysis, a heatmap, and a roadmap. Refer to Section 3 for more information.

(c)   Component 3: Monitoring and Adaptation. This component outlines the Board's approach to monitor emerging technologies and to adapt the IAASB's Technology Position (i.e., components 1 and 2) to ensure it remains relevant based on the evolving technology landscape. Refer to Section 4 for more information.

Agenda for the June 2024 Meeting

4.   During the March 2024 meeting, the Board started to deliberate on the critical aspects of components 1 and 2. The Board will continue to deliberate on components 1 and 2 during the upcoming June meeting and will start deliberating on component 3.

Proposed Timeline for Approval of the Technology Position

5.   The proposed IAASB's Technology Position, encompassing each of its three components as outlined above, will be presented to the Board for approval in September 2024.

Information-Gathering Activities Since the March 2024 Meeting

6.   Staff met with representatives of the following groups since the IAASB's March 2024 meeting:

- April 3rd, 2024: International Forum of Independent Audit Regulators' Standards Coordination Working Group

- April 5th, 2024: The Public Company Accounting Oversight Board's (PCAOB) Office of the Chief Auditor

- April 29th, 2024: Stakeholder Advisory Council (SAC) during the semi-annual SAC meeting

- May 1st, 2024: Jurisdictional/National Standards Setters (NSS) during the IAASB-NSS annual meeting

- May 7th, 2024: International Federation of Accountants' Small and Medium Practices Advisory Group

7.   A session has also been scheduled with Forum of Firms representatives during their meeting at the end of June 2024 to discuss this initiative. Staff will continue to seek opportunities to discuss the IAASB's proposed Technology Position with stakeholders as part of the general outreach program or targeted project outreach.

Coordination Activities

Technology Consultation Group

8.   Staff have regularly solicited input from the Technology Consultation Group (TCG) about the IAASB's Technology Position Initiative. This includes formal consultations with the entire TCG during three meetings held since the beginning of the year, with the latest meeting on May 23, 2024. The members of the TCG are:

(a)   Danielle Davies, former IAASB Staff Fellow

(b)   Johanna Field, Technical Advisor to Eric Turner (Board member)

(c)   Sue Almond, Board member

(d)   Warren Maroun, Board member

(e)   Wendy Stevens, Board member

The International Ethics Standards Board (IESBA)

9.   IAASB Staff have been closely coordinating on this initiative with IESBA Staff. As part of this ongoing coordination, IAASB Staff are now observers at the IESBA's Technology Working Group's meetings, and IESBA Staff are now observers at the IAASB's Technology Consultation Group's meetings.

Contents of this Issues Paper

10.   This paper includes the following sections:

(a)   Section 1: Analysis of Feedback Received

(b)   Section 2: Component 1: Proposed Position Statement

(c)   Section 3: Component 2: Proposed approach to operationalize the Position Statement

(d)   Section 4: Component 3: Proposed approach to monitor and adapt the IAASB's Technology Position

SECTION 1 **Analysis of Feedback Received**

11.   It is important to consider how feedback from stakeholders and Board members influences the IAASB's Technology Position. The feedback has been categorized into eight distinct themes. For each theme, we present a proposal outlining how the feedback impacts the IAASB's Technology Position, including each of its three components.

Theme 1: Scalability in the Standards

12.   Several stakeholders advised the IAASB to avoid mandating the use of technology in engagements due to scalability and other concerns. They argue that many small and medium-sized entities worldwide still rely on unsophisticated or largely manual information systems, making it impractical for auditors to use technology when auditing these entities. Some stakeholders also felt that mandating the use of technology in audit engagements could exacerbate market concentration issues, as firms with more resources to develop and acquire technological tools could gain a competitive advantage.

13.   The Board has no intention to require practitioners to perform technology-enabled procedures in all engagements. During the March 2024 meeting, several Board members noted that traditional procedures remain sufficient in many engagements, including in many audits of financial statements of less complex entities.

> **Traditional Procedures vs. Technology-Enabled Procedures**
>
> We use the term "traditional procedures" in this Issues Paper to differentiate between procedures used in engagements that are more manual in nature, and hence "traditional", with "technology-enabled procedures".
>
> We use the term technology-enabled procedures to refer to a subset of a class of IT applications used by engagement teams in the performance of engagements which are referred to as automated tools and techniques (ATT)[2] in the IAASB's standards.

14.   However, several Board members acknowledged that technology-enabled procedures might be necessary under certain circumstances for specific types of engagements.

15.   For example, in audits, some Board members agreed that it is worth exploring whether the IAASB's International Standards on Auditing (ISAs or auditing standards) should require auditors to determine whether technology-enabled procedures are necessary to achieve audit objectives, such as supporting risk assessments or responding to assertion-level risks. They also felt that the IAASB could introduce application material to help auditors make this determination. They noted that there might be characteristics about the information systems used by entities, for example, that might trigger the need for auditors to use technology-enabled procedures in their audits.

16.   Some Board members pointed out a similar requirement already present in the auditing standards,

---

[2]   In the version of the Proposed ISA 500 (Revised), *Audit Evidence*, that was brought to the Board in December 2023 (Agenda Item 8-A), the Audit Evidence Task Force provided an updated description of the term **automated tools and techniques (ATT)**, as it applies to audit engagements, in paragraph A2A. ATT was described as "technology enabled processes used by the auditor for the purpose of planning or performing the audit…". In this Issues Paper, we use the term **technology-enabled procedures** to denote a subset of those technology-enabled processes within the context of audits. Unless otherwise specified, the term is used to refer to procedures performed across all types of engagements, not limited to audits.

where auditors must determine whether they need to rely on controls in their audit approaches (i.e., a control-based audit approach) because substantive procedures alone cannot provide sufficient appropriate audit evidence to address their assessed assertion-level risks.[3]

17. **Proposal→** The Board commits in the Technology Position Statement to explore introducing requirements for practitioners to determine when technology-enabled procedures are necessary to achieve engagement objectives. If such requirements are introduced, the Board will also provide application material to help practitioners make that determination.

Theme 2: Basis for Referring to Technology in the IAASB's Standards

18. Some stakeholders advised the IAASB to reassess the merits of differentiating between technology-enabled procedures and those that are not. They argue that the method used to perform a procedure, including whether it involves the use of technology, is less relevant than the quality of the evidence obtained.

19. Specifically relating to auditing standards, the IAASB's current approach of highlighting when technology is used in audit procedures, referred to in the auditing standards as using ATT in performing audit procedures, allows the IAASB to specifically identify and describe the unique benefits and challenges of using technology. This approach facilitates the integration of requirements and application material related specifically to the use of ATT in audit procedures.

20. An example of how this approach has proven useful for the Board can be found in the latest version of the proposed audit evidence standard[4] presented to the Board in March. In this project, the Board is exploring whether to introduce a conditional requirement into the audit evidence standard that addresses situations when auditors use ATT to perform audit procedures. Specifically, the proposed conditional requirement would mandate the auditor to consider the appropriateness of data inputs and to determine whether the ATT operates as intended and whether the outputs of the ATT meet the intended purpose of the audit procedure.

21. As the Board reassesses its approach, it is important to consider alternative standard-setting approaches. For instance, the PCAOB does not explicitly refer to the use of technology in its auditing standards. Instead, it addresses challenges that emerge from "technology-assisted analysis" through proposed amendments to the PCAOB's standards.[5]

22. **Proposal→** No change is proposed to the Board's approach.

Theme 3: Barriers in the Standards

23. Auditors have expressed concerns about a lack of clarity regarding how technology-enabled procedures align with the requirements in the auditing standards in certain situations. We heard that

---

3   ISA 330, *The Auditor's Responses to Assessed Risks*, paragraph 8(b).

4   Refer to Agenda Item 5-A of the March 2024 meeting for the latest Proposed ISA 500 (Revised) and specifically to paragraph 10A. for more information about the conditional requirement relating to ATT.

5   Refer to the document published by the PCAOB on June 26, 2023 which describes the proposed Amendments Related to Aspects of Designing and Performing Audit Procedures That Involve Technology-Assisted Analysis of Information in Electronic Form.

this ambiguity forces some auditors to "retrofit" their audit documentation to meet these standards. These auditors find this retrofitting exercise time-consuming and of limited value, particularly because they believe that the quality of the evidence they obtain from technology-enabled procedures is superior to that of traditional procedures. Additionally, some auditors avoid using technology-enabled procedures altogether to mitigate the risk of having their audit approaches challenged by regulators. These issues highlight how ambiguity in auditing standards related to the use of technology can significantly hinder the adoption of technology-enabled procedures, potentially leading to missed opportunities for enhancing audit quality.

24. The Risk Response Workstream Project Team is currently investigating instances where practice does not clearly align with the requirements of some standards within their project scope. A prominent example is the ambiguity surrounding the classification of technology-enabled substantive audit procedures (Refer to Issue #9 in Agenda Item 6 of the March 2024 meeting for more information). This issue arises because these procedures often involve analyzing entire populations of transactions, such as revenue transactions, rather than sampling individual items. The confusion lies in whether the analysis should be classified as a test of details (TOD), which examines individual items or characteristics, or as a substantive analytical procedure (SAP), which analyzes the population as a whole.

25. This classification is critical in the auditing standards because the related requirements differ based on it. For instance, auditors are required to include TODs in their approaches when responding to significant risks, as evidence from SAPs alone is not considered sufficient.[6]

26. At the March 2024 meeting, Board members agreed that the classification issue described above warranted the Board's attention, particularly because it represents a barrier to the use of technology-enabled procedures which have the potential to yield more persuasive audit evidence.

27. **Proposal→** The Board commits in the Technology Position Statement to identify and remove artificial barriers in the standards that deter practitioners from using technology-enabled procedures that could elevate engagement quality, while preserving the foundational value of core auditing and assurance concepts and principles.

Theme 4: Risks of Overstating the Benefits of Using Technology in Engagements

28. A representative of the IAASB's Stakeholder Advisory Council advised the Board to exercise discretion when describing the potential benefits of using technology in engagements, fearing that overstating these benefits could widen the audit expectations gap. This concern arose from observing exaggerated claims by some commentators about the benefits of using technology in audits, such as "technology allows auditors to test 100% of entities' transactions."

29. Staff agree that the claim is exaggerated. It implies that technological advancements enable auditors to obtain absolute assurance on all assertions (e.g., existence, completeness, valuation) for all financial statement line items and disclosures. This claim rests on an unsupportable assumption that technology can address all risks, challenging the relevance of the audit risk model that is foundational to the auditing standards. It also overlooks that absolute assurance is unachievable due to inherent limitations in audits. The auditing standards require auditors to obtain reasonable assurance about

---

6   ISA 330, *The Auditor's Responses to Assessed Risks,* paragraph 21

whether the financial statements as a whole are free from material misstatement, whether due to fraud or error.

30. The IAASB's messaging on the use of technology in the standards will aim to balance descriptions of potential benefits with the associated risks. As described in ISA 220[7] (para. A63), technology offers significant advantages, such as the ability to analyze large data sets and identify patterns, leading to more effective challenges of management's assertions and the exercise of professional skepticism. However, the standards also highlight significant challenges that auditors must be aware of and manage when using technology, including automation bias (ISA 220, para. A35), which is the tendency to favor outputs from automated systems even when human reasoning or contradictory information raises questions about the reliability or suitability of such outputs

31. **Proposal→** Balance descriptions in the Technology Position Statement about the benefits of technology, in engagements and the firms' systems of quality management (SOQM), and the associated challenges.

Theme 5: Emerging Risks from Disruptive Technologies Used by Entities

32. Referring specifically to the auditing standards, stakeholders recommended that the Board's focus should not be limited to the technology used by auditors, but also consider the impact of technology employed by the entities under audit. Stakeholders noted that disruptive technologies used in entities' financial reporting processes, including artificial intelligence (AI), are introducing new risks that auditors must be able to identify and respond to.

33. The Board agreed at the March 2024 meeting that this broader focus is essential for addressing the evolving landscape of financial reporting and ensuring that audit standards remain effective and relevant.

> **What are "disruptive technologies"?**
>
> Disruptive technology is an innovation that significantly alters the way that consumers, industries, or businesses operate. A disruptive technology sweeps away the systems or habits it replaces because it has attributes that are recognizably superior. (source: Investopedia)

34. A recent publication by the Centre for Audit Quality (CAQ) titled "Auditing in the Age of Generative AI" reported that a third of audit partners surveyed had observed entities in their primary industry sector either deploying or planning to deploy AI in their financial reporting processes. The CAQ anticipates this number will grow as entities explore ways AI, including generative AI, can streamline or enhance accounting and financial reporting operations. The publication examines the audit implications of new risks that are emerging associated with the use of generative AI in financial reporting processes and internal control over financial reporting (ICFR).

35. As part of this initiative, the Board will consider the impacts of technologies used by entities on the IAASB's standards. That will involve evaluating, for current and future standard-setting projects, whether the requirements and application material in standards provide sufficient guidance for practitioners to appropriately identify, assess, and respond to new risks that have emerged.

36. **Proposal→** The Board commits in the Technology Position Statement to evaluate whether, for

---

[7] ISA 220 (Revised), *Quality Management for an Audit of Financial Statements*

current and future standard-setting projects, requirements and application material in standards provide sufficient guidance for practitioners to appropriately identify, assess and respond to new risks emerging from disruptive technologies used by entities.

Theme 6: Role of the IAASB in Setting Guardrails

37.   A slew of new regulations worldwide, including the recently enacted European Union AI Act and President Biden's Executive Order on Safe, Secure, and Trustworthy AI, acknowledge the risks associated with accelerating developments in AI capabilities. These regulations recognize that not all AI use cases serve broader societal interests, underscoring the need for careful oversight, and in some cases, outright prohibitions on certain AI applications

38.   The IAASB is facing important questions regarding its role as a standard-setter in establishing guardrails for the responsible deployment of advanced technologies in engagements. Specifically related to audits, the following are important questions for the Board to consider as it continues to shape its Technology Position:

(a)   *Role of the IAAASB*: Are there limits that should be set in the auditing standards around the use of unproven technologies that may undermine audit quality?

(b)   *Role of the Firms*: Should the responsibility to set those limits (see above) be left solely to the discretion of the firms as they establish and maintain their systems of quality management?

(c)   *Explainability and Interpretability*: Should there be a requirement in the standards that the outputs of sophisticated tools used in engagements be explainable and interpretable?

(d)   *Enhancing Professional Skepticism*: Are additional requirements or application material needed in the standards to ensure that technology enhances rather than diminishes professional skepticism and judgment in audits?

(e)   *Ethical Considerations*: Are there additional ethical considerations, beyond those already described in ethical frameworks like IESBA's Code[8], that may be relevant in ensuring that technology is used responsibly in audits (e.g., in a way that appropriately balances audit quality and audit efficiency considerations)?

39.   **Proposal→** The Board commits in the Technology Position Statement to strengthen the guardrails in the standards that ensure appropriate technological resources are obtained, developed, implemented, maintained, and used effectively.

---

[8]   "Code" refers to IESBA's *International Code of Ethics for Professional Accountants (including International Independents Standards).*

Theme 7: Lessons Learned from Other Industries

40. The Board will explore lessons learned from other industries to evaluate whether its standard-setting process adequately addresses and balances both the opportunities and risks relating to the use of technology by practitioners and entities.

41. As audit firms increasingly incorporate technology into their engagements and SOQMs, insights from other industries that utilize complex models can be valuable. A preliminary examination by Staff of the banking industry reveals significant parallels with the assurance services industry. Both industries use data-driven algorithms to support human decision-making.

42. Banks have long used models for functions such as risk assessment, capital allocation, and regulatory compliance. Understanding their model risk management processes, which ensure reliable and accurate outputs (refer to Appendix 1 for a list of some of these processes), will be beneficial to the Board. For example, these insights can help inform an assessment of the adequacy of requirements and application materials in ISQM 1, which deals with technological resources used by firms in their SOQMs and engagements.[9]

43. **Proposal→** The Board will integrate lessons learned from other industries, including the banking sector, in the gap analysis described in component 2.

Theme 8: Importance of "Future-Proofing" the Standards

44. Several stakeholders advised the IAASB to be judicious about including references in the standards to technologies that could become outdated because of the rapid pace of technological advancement.

45. The Board agrees. Some of the measures discussed at the March 2024 meeting to ensure that the standards remain effective and relevant included:

    (a) *Principles-Based Approach*: Emphasize a principles-based approach in the standards, focusing on the core objectives and outcomes of audit processes rather than specifying particular technologies. This approach allows for flexibility and adaptability as new technologies emerge.

    (b) *Non-Authoritative Support Material (NASM)*: Issue NASM that can be updated more frequently than the standards themselves. This allows practitioners to receive timely advice on integrating new technologies while the core standards remain stable.

    (c) *Stakeholder Engagement*: Foster ongoing dialogue with stakeholders, including technology experts, audit firms, and regulatory bodies, to gather insights and feedback on the evolving landscape of technology in auditing and other assurance engagements. This collaborative approach ensures that the standards reflect practical realities and emerging best practices.

    (d) *Regular Reviews and Updates*: Implement a systematic process for the periodic review and update of standards to ensure they remain current with technological developments. This may include expanding the mandate of the Technology Consultation Group to monitor technological trends and assess their impact on auditing practices.

---

[9] International Standard on Quality Management 1, *Quality Management for Firms that Perform Audits or Reviews of Financial Statements, or Other Assurance or Related Services Engagements.*

46. **Proposal→** The Board will enhance its processes in component 3 to ensure that the standards continue to reflect practical realities and emerging best practices.

Matters for IAASB Consideration:

1. Board members are asked for their views on:

   (a) Whether there are any important themes that missing in the feedback provided by the Board at the March 2024 meeting.

   (b) The analysis of the feedback and proposals that emerge from the feedback as presented in paragraphs 11–46.

SECTION 2 **Component 1: Technology Position Statement**

Introduction

47.　At the March 2024 meeting, Board members expressed support for reorienting the IAASB's current stance, which some stakeholders regard as "technology agnostic," to one that actively facilitates and, where appropriate, encourages the use of technology in engagements and SOQMs.

48.　Board members recognized the global trend of industries increasingly leveraging technology to extract insights from data. They explored why the assurance services industry is perceived as a relatively late adopter of technology, even when assurance practices are compared to their advisory practice counterparts in the same firms. Some members attributed this lag to the regulatory environment. The Board agreed that the assurance services industry must continue to innovate to meet market needs and remain attractive.

49.　The Board supported the view that standards should not hinder technology-enabled innovation in engagements and SOQMs. Some members went further, advocating for standards to actively encourage the use of technology to further enhance the consistent performance of quality engagements. Additionally, some Board members noted that technology-enabled procedures might be necessary in some circumstances for certain types of engagements. They suggested exploring whether standards should require practitioners to determine whether it is necessary to use technology in their engagements to achieve engagement objectives.

50.　However, the Board also agreed that traditional procedures remain adequate for many engagements, including audits of financial statements for less complex entities. Board members also felt that widely available and cost-effective technological resources are generally sufficient for SOQMs in smaller firms, depending on their unique needs.

Proposed Technology Position Statement

51.　The following is the proposed Technology Position Statement.

Technology Position Statement

Commitment to the Public Interest: The IAASB recognizes the transformative potential of technology in achieving more consistent performance of quality engagements in the public interest in its standard-setting and other related activities, including developing (or facilitating the development) of non-authoritative materials.

The following key principles will guide the Board in building on this commitment:

- **Embracing Innovation by Practitioners and Firms**:

　　The Board embraces technology-driven innovations in engagements and systems of quality management (SOQMs) that lead to more consistent performance of quality engagements. The Board will ensure that the standards facilitate and, where appropriate, encourage the use of technology in engagements and SOQM.

- **Removing Artificial Barriers in the Standards:**

　　The Board will identify and remove artificial barriers in the standards that deter practitioners from

---

using technology-enabled procedures that could elevate engagement quality, while preserving the foundational value of core auditing and assurance concepts and principles.

- **Ensuring Scalability and Flexibility:**

  The Board acknowledges that the use of technology is not always necessary in engagements and that relatively unsophisticated technological resources can be adequate in some SOQMs. The Board is committed to retaining scalability in the standards to meet the unique needs of each engagement and firm, allowing practitioners to determine the necessity of technology based on specific circumstances.

- **Exploring Requirements for Determining whether Technology-Enabled Procedures are Necessary in Engagements:**

  The Board will explore introducing requirements for practitioners to determine whether technology-enabled procedures are necessary to achieve engagement objectives. If such requirements are introduced, the Board will also provide application material to help practitioners make that determination.

- **Exploring the Impact on the Standards of Technology used by Entities**:

  The Board recognizes that the use by entities of increasingly sophisticated technologies in financial reporting and other external reporting introduces new risks. The Board will evaluate, for current and future standard-setting projects, whether its standards provide sufficient guidance for practitioners to appropriately identify, assess, and respond to these new risks.

- **Strengthening the Guardrails in the Standards:**

  To safeguard engagement quality and maintain public trust, the Board is committed to strengthening the guardrails in the standards, ensuring appropriate technological resources are obtained, developed, implemented, maintained, and used effectively.

- **Continuous Engagement and Refinement:**

  The IAASB will maintain ongoing dialogue with stakeholders, ensuring transparency and monitoring the effectiveness of technology-related revisions. This continuous process, guided by the Public Interest Framework, focuses on balancing stakeholder interests and ensuring robust, implementable, scalable, enforceable standards that enhance the reliability of external reporting and the efficiency of capital markets.


Matters for IAASB Consideration:

2.   Board members are asked for their views on the proposed Technology Position Statement.

| SECTION 3 | **Component 2: Approach to Operationalize the Position Statement** |

Introduction

52. This section describes the proposed approach for how the IAASB will translate the abstract principles outlined in its Technology Position Statement into concrete actions. The proposed approach involves undertaking a gap analysis to identify gaps in the standards, the use of a heat map to help prioritize the severity of the identified gaps, and a roadmap that describes how the Board intends to address the gaps.

53. The gap analysis, heatmap and roadmap are collectively referred to as the IAASB's Technology Position's *deliverables*.

Deliverables

Gap Analysis   **Heatmap**   **Roadmap**
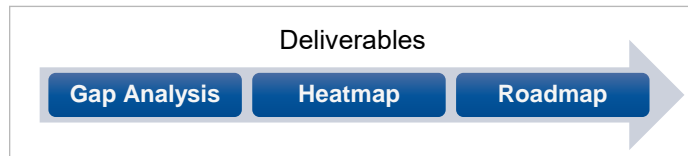
54. At the September 2024 meeting, the Board will vote on whether to approve the proposed Technology Position, including the proposed approach described here for component 2. For greater clarity, the Board will not be voting on the deliverables themselves.

55. Completing the deliverables will require a thorough, methodical process, including gathering feedback from stakeholders, to ensure outcomes are well informed. These updates will allow the Board to provide ongoing feedback. Initially, the deliverables will focus on identifying gaps in standards and related actions for standards currently under revision, particularly those within the scope of the Risk Response Workstream. The output of the deliverables will also inform future IAASB Work Plan decisions.

56. The Board will receive semi-annual updates on the status of the deliverables, starting at the September 2024 meeting. Additionally, a dedicated webpage will be created on the IAASB's website to house the approved Technology Position and the most up-to-date versions of the deliverables. The deliverables are, by their nature, "living documents" that must evolve and be updated as work progresses. These updates will be presented to the Board regularly.

Gap Analysis

57. The gap analysis will involve a comprehensive review of the IAASB's standards to identify areas that fall short of the principles outlined in the Position Statement. This analysis will consider technological advancements, regulatory requirements, and industry best practices. The objective is to pinpoint specific gaps that need to be addressed to align with the Position Statement's principles.

Prioritization and Heat Map

58. Once identified, the gaps will be prioritized based on urgency, impact, and feasibility to address. A heat map will be created to visually represent the priority level of the gaps and will serve as a decision-making tool.

Roadmap Development

59. The last step will be to develop a roadmap that outlines proposed actions to address the identified gaps, together with timeline and resources implications, as appropriate. "Actions" in this context refers

to high-level actions that address gaps identified based on applying the principles outlined in the Position Statement. The actions will be executed through current or future standard-setting projects or projects that fall under the IAASB's "other related activities," including developing (or facilitating the development of) non-authoritative support materials.

60.   The roadmap will provide a clear path forward, ensuring that the necessary steps are taken systematically and efficiently. Regular updates will be provided to the Board to monitor progress and make adjustments as needed.

Matters for IAASB Consideration:

3.   Board members are asked for their views on the proposed approach to operationalize the Technology Position Statement.


SECTION 4 Component 3: Approach to Monitor & Adapt the Technology Position

Introduction

61. This section describes the IAASB's current approach to monitor emerging technologies adopted by entities and practitioners that could potentially challenge the continuing suitability of the Board's Technology Position. Board members will deliberate on whether there are opportunities to enhance this approach.

62. Additionally, this section proposes a mechanism for the Board to adapt its Technology Position to ensure it remains relevant based on the evolving technology landscape.

Monitoring

63. It is crucial for the Board to closely monitor the developments and adoption of emerging technologies by entities and practitioners. This ongoing monitoring will help ensure that the IAASB's standards remain effective and relevant for all types of engagements.

64. The IAASB already has an approach for monitoring developments in technology as illustrated below. For example, the Board receives input from Jurisdictional/National Standard Setters (NSS) about emerging technological developments in jurisdictions around the world. The Board also regularly solicits input from two technology focused IAASB groups: the Technology Consultation Group (TCG) and the Digital Advisory Group (DAG).
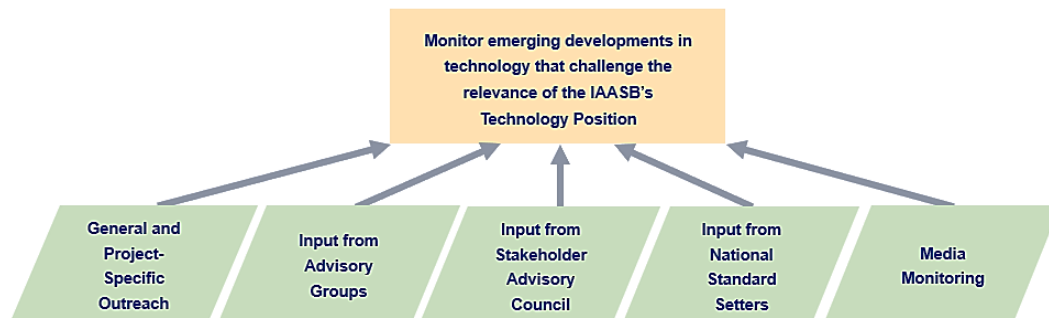
65. The TCG is a key source of feedback for the Board as it explores technology-related revisions to auditing standards.[10] The TCG also regularly publishes non-authoritative support material related to technology, including non-authoritative guidance about the use of ATT in audits (visit the IAASB's Technology Consultation Group webpage for more information). The TCG has also been instrumental in helping to shape the Board's Technology Position (refer to paragraph 8 for more information).

66. The Board also periodically solicits the views of the DAG on disruptive technologies. The DAG's five members bring invaluable perspectives on technology's impact on standards. Their expertise spans FinTech and RegTech innovation, AI applications in audit processes, and leadership in digital transformation within financial services. This diverse expertise ensures the Board effectively monitors

---

[10] See references to technological resources, including ATT, in recently revised standards: ISA 220 (Revised), *Quality Management for an Audit of Financial Statements*, ISA 315 (Revised 2019), *Identifying and Assessing the Risks of Material Misstatement*, ISA 600 (Revised), *Special Considerations–Audits of Group Financial Statements (Including the Work of Component Auditors*, and in ongoing projects, including proposed revisions to ISA 240, *The Auditor's Responsibilities Relating to Fraud in an Audit of Financial Statements,* ISA 500, *Audit Evidence*, and ISA 570 (Revised), *Going Concern*.

the evolving technology landscape. The DAG will meet again in July to provide strategic input on the IAASB's Technology Position Initiative.

Adaptation

67.   What the Board lacks, however, is a formal process to systematically assess how critical developments in technology, including disruptive technologies in particular, may influence the direction of the Board's standard-setting and other related activities. Although the Board regularly receives updates on disruptive technologies, such as those in March 2023 and September 2022, a formal mechanism to "connect the dots" is needed.

68.   Staff propose that the Board formalize a process to receive a semi-annual update on emerging technological developments, focused on disruptive technologies. The update could include a dashboard which ascribes a significance rating to each issue identified in the IAASB's monitoring process (as described above) based on factors like urgency and impact on the Board's standard-setting and other related activities. This semi-annual update could coincide with the updates the Board will receive on the Technology Position's deliverables described in component 2.

69.   Staff understand that some NSS representatives have similar processes in their respective jurisdictions. Staff believe that the activities in this component will be enhanced significantly through collaboration with the NSS network. Staff will reach out to NSS representatives during the third quarter to explore potential collaboration opportunities.

Matters for IAASB Consideration:

4.   Board members are asked for their views on:

(a)   The current approach to monitor emerging developments in technology and how it may be enhanced.

(b)   The proposed approach to adapt the IAASB's Technology Position to emerging developments that may challenge its ongoing suitability.

Appendix 1

Model Risk Management Processes at Banks

The following are some of the risk management processes that banks use to ensure their models provide reliable and accurate support for decision-making and regulatory compliance.[11]

1. **Model Governance**

   (a) *Model Inventory***:** Maintain a comprehensive inventory of all models used within the bank, including details on their purpose, methodology, and usage.

   (b) *Model Ownership***:** Assign clear ownership and accountability for each model, including roles for model development, validation, and oversight.

   (c) *Model Policy and Standards***:** Develop and enforce policies and standards for model development, usage, and management, ensuring consistency and compliance across the organization.

2. **Model Development and Documentation**

   (a) *Transparent Development Process***:** Ensure models are developed following a transparent and documented process, including defining objectives, selecting methodologies, and data preparation.

   (b) *Comprehensive Documentation***:** Maintain thorough documentation for each model, detailing assumptions, limitations, and the rationale behind the chosen methodology. This aids in understanding and auditing the models.

3. **Model Validation and Testing**

   (a) *Independent Validation*: Conduct independent model validation to verify the model's accuracy, robustness, and appropriateness for its intended use. This should include reviewing the model's assumptions, inputs, and outputs.

   (b) *Backtesting*: Regularly backtest models against historical data to ensure they perform well under different scenarios and market conditions.

   (c) *Stress Testing*: Perform stress testing to evaluate how models behave under extreme but plausible conditions. This helps identify potential vulnerabilities.

4. **Ongoing Monitoring and Performance Review**

   (a) *Regular Monitoring*: Continuously monitor model performance through key performance indicators (KPIs) and thresholds. Promptly address any deviations or performance issues.

   (b) *Periodic Reviews*: Schedule periodic comprehensive reviews of models to reassess their validity, accuracy, and relevance in light of changing market conditions or new data.

   (c) *Model Calibration*: Regularly recalibrate models as needed to ensure they remain accurate and aligned with current data and market trends.

---

[11] The information was sourced from the Federal Reserve's (Board of Governors of the Federal Reserve System) supervisory guidance on model risk management (SR 11-7).

5. **Data Management**

   (a) *Data Quality Controls*: Implement robust data quality controls to ensure the accuracy, completeness, and integrity of the data used in model development and execution.

   (b) *Data Governance*: Establish a data governance framework that includes data ownership, data lineage tracking, and policies for data access and usage.

6. **Compliance and Regulatory Oversight**

   (a) *Regulatory Compliance*: Ensure that all models comply with relevant regulatory requirements and guidelines, such as those from the Basel Committee on Banking Supervision (BCBS) or local regulatory authorities.

   (b) *Audit Trails*: Maintain detailed audit trails for model development, validation, and usage to facilitate regulatory reviews and audits.

7. **Risk Management Culture and Training**

   (a) *Risk Awareness*: Foster a culture of risk awareness and responsibility among employees involved in model development and usage.

   (b) *Training Programs*: Implement ongoing training programs to ensure that staff are knowledgeable about best practices in model risk management and stay updated on emerging risks and regulatory changes.

8. **Model Risk Appetite and Limits**

   (a) *Risk Appetite Framework*: Define the bank's risk appetite for model-related risks, including setting clear limits and thresholds for acceptable risk levels.

   (b) *Risk Reporting*: Establish regular reporting mechanisms to communicate model risk exposure to senior management and the board of directors.