Minutes of the 5th annual meeting of the INTOSAI Working Group

on Impact of Science and Technology on Auditing (WGISTA)

U.S. Government Accountability Office (GAO) - Washington D.C

May 6-7, 2025

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*The **Fifth Annual Meeting of the INTOSAI Working Group on Impact of Science and Technology on Auditing (WGISTA)** was held at the **U.S. Government Accountability Office (GAO)** headquarters in Washington, D.C., from May 6-7, 2025,The meeting was attended by **Mr. Mohamed Abdel Ghany Abdel Razek**, vice president of the Accountability State Authority of Egypt, who was there on behalf of **His Excellency Counselor Mohamed El-Feisal Youssef**, Head of the ASA of the Arab Republic of Egypt and Chairman of the Working Group. **His Excellency Mr. Gene Dodaro**, Comptroller General of the United States and Vice-Chair of the Working Group, was also in attendance.*

This document constitutes the official record of the proceedings of the 5th Annual Meeting of the Working Group on Impact of Science and Technology on Auditing (WGISTA), convened at the premises of the United States Government Accountability Office in Washington D.C. on the aforementioned dates, facilitating discussions on key issues pertaining to information systems and technology audit, fostering collaboration and the exchange of best practices among the attending parties and the main theme of that meeting is " Challenges and Opportunities of Emerging Technologies".

First Day : Tuesday . 6th of May 2025

Opening plenary

First , the Opening Remarks

H.E. Mr. Gene Dodaro welcomed participants, emphasizing the importance of the Working Group in addressing the developments in science and technology and its impact on auditing practices. He highlighted the dual objective of the group: advising governments on the use of innovative technologies and leveraging these technologies to improve auditing practices.

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Mr. Dodaro articulated that the meeting was not only a forum for addressing challenges but also a valuable opportunity to explore new possibilities and develop a clear roadmap to empower Supreme Audit Institutions to perform their roles effectively in this era of technological change. He announced that the meeting's theme was "Challenges and Opportunities of Emerging Technologies" and outlined the key topics that would be discussed.

Second, the Opening Speech:

Vice President Mohammed Abdel Ghani, Vice President of the Accountability State Audit Authority of Egypt, expressed gratitude to the GAO for hosting the meeting and underscored the significance of international cooperation in navigating the challenges and opportunities presented by emerging technologies. He emphasized the importance of collaboration and knowledge sharing among audit institutions to navigate these challenges and explore new possibilities.

Also highlighted the group's role in promoting understanding and coordination among audit institutions in addressing technology-related audit challenges.

Additionally ,Vice president. Mohammed Abdel Ghani urged members to actively collaborate, engage, and share information and experiences to ensure the working group's success and effectiveness.

Moreover, speak about the main theme of the meeting was "*Challenges and Opportunities of Emerging Technologies," and the discussions covered several key topics:*

- *Ethical considerations in the use of emerging technologies in auditing.*
- *The role of auditors in emerging technologies.*
- *Governance of emerging technologies.*
- *Impact of technology on auditor independence and objectivity.*
- *Remote auditing.*

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- *Impact of 5G technology on auditing.*
- *The future of continuous auditing and monitoring.*

Vice president. Mr. Mohammed Abdel Ghani reiterated his appreciation to the U.S. GAO for their hospitality and expressed his gratitude to the WGISTA Secretariat for their efforts in preparing for the meeting. He expressed his anticipation for productive discussions and meaningful outcomes to support the strategic objectives of WGISTA.

Adopting the Meeting's Agenda:

Vice president Mr. Mohamed Abdel Ghani reviewed the agenda of the meeting – which was held along two days from 6th to 7th of May 2025- The agenda has been revised to incorporate the following three items:

- *The adoption of the Work Plan for the period 2026-2028.*
- *The announcement of the launch of the WGISTA website on INTOSAI Community Portal.*
- *Presentation from IDI.*

And vice president requested the participants' any relevant comments or suggestions . afterward , the WGISTA member SAIs adopted the Meeting's Agenda items.

The WGISTA Secretariat's reviewed a summary of the terms of reference, which included key points which it's as follows:

Background: *WGISTA was established in 2018, following a proposal at the INCOSAI meeting in 2019.*

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Mission: *To equip Supreme Audit Institutions (SAIs) with the knowledge and strategic insight needed to navigate the evolving auditing landscape shaped by rapid technological advancements.*

Mandate:

Support SAIs in using science and technology in their audit processes.

Assist SAIs in auditing governments' application of science and technology.

Membership: *Open to all SAIs, with a process for application and admission.*

Responsibilities: *Includes chair, vice-chair, and member responsibilities for leadership, work plan management, project oversight, and active participation.*

WGISTA Annual Meeting: *SAIs meets annually to discuss technology and auditing. The meeting is presided over by the Chair of Working Group..*

Reporting:

Annual report to the KSC Steering Committee.

Regular progress reports to the Chair of the Working Group.

Publication of reports and best practices.

Seminars and Webinars: *At least two webinars annually for knowledge sharing on emerging technologies.*

Communication*: English is the working language, with email as the primary communication method and the INTOSAI Community Portal as the central hub.*

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*Then , The Vice President Mr. Mohamed Abdel Ghani inquired if there were any comments**, and subsequently the WGISTA member SAIs adopted the Terms of reference.***

The WGISTA Secretariat's reviewed a summary of the Work Plan 2026-2028, which included key points which it's as follows:

- *Goal 1: Enhance cooperation among SAIs and WGISTA members through research and knowledge sharing.*

- *Key activities include publishing an annual magazine, preparing research papers, and launching a competition to encourage innovation.*

- *Goal 2: Enhance the capabilities of SAIs to audit emerging technologies.*

- *Key activities include cooperation with international organizations, entities and strengthening ethical frameworks for the use of emerging technologies .*

- *Goal 3: Develop practical tools and guidelines.*

- *Key activities include preparing a glossary of key terms related to Emerging Technologies and their uses and designing an emerging technologies audit matrix.*

- *Goal 4: Enhance auditors' understanding of the importance of science and its impact on auditing.*

- *Key activities include providing basic knowledge in auditing identity verification technologies and technologies to mitigate climate change.*

- *Goal 5: Updating the database of experts in the field of emerging technologies.*

- *Key activities include preparing criteria for classifying an "expert", collecting data, designing a data model, classifying experts, and utilizing experts.*

Then, The Vice President Mr. Mohamed Abdel Ghani inquired if there were any comments,

SAI Kenya has raised inquiries regarding the following :

- *What is the specific procedures preparation for research and publication?*
- *What initial guidelines will govern the research and publication processes?*
- *about the database experts can be outside SAIs from institutions or academics?*
- *To the database experts, how can we guide and collaborate with various institutions, including non-SAIs, in defining relevant expertise?*

SAI UK National Audit Office has raised inquire from zoom virtual regarding the experts can be outside SAIs from institutions or academics.

SAI Egypt has responded to the previous inquiries as follows:

- ***First,** about the contents of magazine and what will publish, and any other information related to magazine that we will establish editorial board from WGISTA members to oversee the preparation and publication process to ensure the quality of the content consistent with the objectives of the working group.*
- ***Second , about Data base experts:** its ongoing project, so we will be updating the database of experts by sending to all SAIs to add the experts with the possibility of cooperation with academies and institutions with*

expertise in emerging technology, and under responsibility of related regulatory SAI .

- ***Actually, from this point WGISTA Secretariat invite ISACA to 5th annual meeting ,***
- *ISACA welcome to WGISTA members and encourage collaborate between ISACA institution and WGISTA and highlighted their focus on adapting IT audit practices for the unique challenges of AI, emphasizing the critical need for transparency, trust, and validation in these systems. Their work aligns with ISACA's broader mission of promoting digital trust globally.*

and subsequently the WGISTA member SAIs adopted the work plan 2026-2028.

Furthermore ,Mr. Vice President / Mohamed Abdel Ghani announce the following two matters :

- *SAI Iran as a new member of WGISTA Working Group.*
- *The official launch of the WGISFA website on the INTOSAI Community Portal, the process of uploading content is underway, The website on the INTOSAI Community Portal will serve as the central platform for sharing documents, updates, and activities. Attendees were encouraged to visit the page to stay connected.*

Panel Discussion virtual on zoom title " Challenges and opportunities with use and Auditing of Emerging Technologies"

Panelists of that discussion as follows:

- *Dr. Daniel Ho, Professor at Stanford University.*
- *Mr. Martin Skorczynski, Assistant Director, GAO Innovation Lab.*
- *Mr. Javed Masood, Controller, SAI Pakistan .*
- *Mrs. Reva Schwartz, Co-founder, Civitaas Insights.*

The following points were addressed:

- Ethical considerations in the use and audit of emerging technologies.

- The future of auditing and oversight of emerging technologies.

They started with Introduction

- *The panel discussion focused on challenges and opportunities in auditing emerging technologies, including ethical considerations and the future of auditing in this space.*
- ***Dr. Andrew Stavisky** introduced the panelists and the topic, emphasizing the rapid evolution of emerging technologies and their impact on government and auditing.*
- *Emerging technologies were defined using ChatGPT as new, rapidly developing technologies with the potential for significant disruption across industries. Examples include AI, robotics, blockchain, quantum computing, and virtual reality.*
- *Panelists were asked to discuss their experiences with emerging technology and government.*

2. Panelist Introductions and Experiences

- ***Mrs. Reva Schwartz** discussed her background in linguistics, human language technology, measurement and evaluation , and her work in evaluating advanced technologies, including AI risk assessment. She*

mentioned her involvement with DARPA, IAR, NIST, and the NIST ARIA program.

- ***Mr. Daniel - Ho,*** *shared his experience centered around AI, including advising the White House on AI policy and working with agencies like the Internal Revenue Service and the U.S. Department of Labor on AI auditing and evaluation.*
- ***Mr. Javed Masood*** *introduced himself as a member of the Pakistan Audit and Accounts Service and mentioned his research paper on emerging technologies and public sector audit.*
- ***Mr. Martin Skorczynski*** *discussed his role in GAO's Innovation Lab, focusing on researching and developing data science and emerging technology solutions for enhancing oversight capabilities. Technologies mentioned include blockchain, cloud technologies, extended reality, and digital twins.*

3. Discussion: Integrating Emerging Technologies

- *The first question posed to the panel was: What are some things that audit institutions should be thinking about as they integrate emerging technologies and data analytics into their operations?*
- ***Mr. Martin Skorczynski*** *emphasized that integrating emerging technologies is not just a technical matter but involves new government programs, investments, process changes, and skills development. He stressed the importance of data governance, quality assurance, and creating an environment for experimentation. He also discussed the concepts of diffusion of innovation, adoption of innovation solutions, and technology absorption.*
- ***Mr. Dan He*** *added to Mr. Martin's points, raising the issue of how much existing audit institutions can be retrofitted versus the need for structural changes. He highlighted the challenges of auditing AI systems due to their evolving nature and the difficulty of tailoring audits to the wide range of AI applications.*

Dr. Landry Signé from the Brookings Institution was then introduced as the keynote speaker.

- *Dr. Signé's extensive background in global political economy, governance, sustainable development, emerging markets, and the Fourth Industrial Revolution was highlighted.*

Keynote Address: Agility and Navigating the Technological Revolution in a Complex World

- Dr. *Signé began his address, emphasizing that it would be more of a conversation than a lecture ,He acknowledged the expertise of the attendees and appreciated their participation.*
- *The discussion focused on agility and navigating the technological revolution.*
- *Dr. Signé highlighted the difference between the pace of technological adoption in the past (e.g., the printing press, cars, landlines) and the present (e.g., ChatGPT), noting the incredibly rapid pace of change today.*
- *He contrasted the rapid evolution of innovation with the slower pace of change in government structures ,discussed the pressures on governance due to social, economic, and health system trends.*
- *He explained the characteristics of the Fourth Industrial Revolution: velocity, scope, and systems impact and listed examples of key technologies, including AI, big data, cloud computing, and virtual reality.*
- *Dr. Signé spoke about the shifts in work (e.g., remote vs. in-person), the need for a digital mindset, and lifelong learning.*
- *He introduced the concept of the seven items for successful technological development: financial, enabling environment, innovation and tech, perception, human, physical, and agility and emphasized the importance of agility for governments to enable innovation while managing its impact.*

- *Dr. Signé discussed the applications of technology and their implications for society, including labor and production.*
- *He touched on the risks associated with technological transformation, such as job transformation and the need for reskilling and also addressed security and conflict, noting the asymmetry of power between those using technology for malicious purposes and governments' capacity to respond.*
- *Dr. Signé defined agility in the context of governance as readiness for change, flexibility, and adaptation.*
- *He identified key reasons why agility is important, including the pacing challenge (the speed of innovation) and the coordination challenge (who is in charge of ensuring transformation).*
- *He discussed the role of government, civil society, the private sector, and continental and global bodies in ensuring agility.*
- *Dr. Signé highlighted the challenge for governments in keeping up with the pace of technological change in policy making.*

Presentation by Working Group on IT Audits (WGITA) by SAI -India (chair of WGITA) : titled " synergies and coordination between WGITA and WGISTA."

The session transitioned to a presentation on the work plans and potential synergies of the working groups, representatives from the working groups, including Mrs. Nandana Munshi , and Dr. Sandip Roy, presented.

- *The presentation covered the status of the work plan, proposed work plan, status of digital projects, tentative projects, and the use of science and technology in audit.*
- *The presenters highlighted the common interests of the working groups in advancing IT in public sector auditing and the potential for collaboration.*
- *Dr. Sandeep Rai provided details on the mandate of the working groups, including knowledge sharing, capacity building, and development of standards and guidelines.*

- *The presentation included specific projects undertaken and planned by the working groups, such as guidelines on cybersecurity, AI solutions, and IT audit.*
- *Case studies were presented on the use of remote sensing, GIS, and drones in audits in India, particularly in areas such as mining, land use, and environmental monitoring.*
- *The benefits of these technologies, including improved efficiency, transparency, and accountability, were emphasized.*
- *Areas of potential collaboration between the working groups were outlined, including standardization, joint research, cybersecurity, education and training programs, and shaping policies related to the ethical use of automation.*
- ***SAI Egypt suggested:** establishing a subgroup within WGISTA to design and conduct surveys to identify the needs and challenges faced by the INTOSAI community, aligning with INTOSAI's strategic goals for knowledge sharing and collaboration.*

Presentation from GAO Title by "GAO's High- Risk Series on IT Modernization"

Which it presented by Mr. Nick Marions, ,managing Director , information technology and Cybersecurity , GAO.

Key points :

- *The federal government faces challenges in IT acquisition and management, which has led to this area being designated as high-risk.*
- *These challenges include issues with overseeing and managing IT portfolios, implementing mature IT acquisition and development practices, and building federal IT capacity and capabilities.*
- *The GAO has identified nine critical actions that the federal government needs to take to address these challenges.*

- *The presentation also discussed related topics such as the FAFSA application issues, Agile Assessment Guides, building federal IT capacity, AI implementation across agencies, and cybersecurity strategies.*

In essence, the presentation highlights the GAO's work in identifying and addressing critical IT management issues within the federal government, aiming to improve efficiency, reduce costs, and minimize risks.

Presentation from IDI

This presentation discusses the INTOSAI Development Initiative's (IDI) efforts to support Supreme Audit Institutions (SAIs) in leveraging and auditing technology.

Key initiatives and topics include:

- ***LOTA (Leveraging on Technological Advancements) Pioneers:*** *A program aimed at developing leaders, auditors, and systems for auditing technology. The program includes training, development of technology audit strategies, and conducting technology audits.*
- ***LOTA Talks Webinar Series:*** *An annual series of talks by experts on topics like healthcare audit analytics, digital age auditing, cybersecurity, continuous auditing, and artificial intelligence.*
- ***Global Summit:*** *The presentation highlights the Global Summit on SAIs' Audits Contribution to Sustainability and Digitalization, which focused on SAIs' role in digital governance and sustainability.*
- ***SAI Audit Analytics and SAI Technology Auditors:*** *Upcoming initiatives focused on developing SAI auditors' competence in data analytics and auditing government digital transformation.*
- ***Digitalization as a Strategic Priority:*** *The presentation emphasizes digitalization as a key strategic priority, with initiatives to enhance the use of technology in SAI governance and audit practices.*

In essence, the presentation outlines IDI's strategy to support SAIs in navigating the digital age by providing training, resources, and platforms for knowledge sharing and collaboration.

Closing Remarks

- *The session was closed with thanks to the presenters and attendees.*

Second Day: Wednesday , 7th of May 2025

Several SAIs' representative delivered PowerPoint presentations relate to the meeting's theme " Challenges and Opportunities of Emerging Technologies" , as follows:

1. SAI Egypt: " Auditing and Governance in Emerging Technologies: Ensuring compliance and Accountability":

SAI Egypt delivered its presentation on Emerging Technologies , including definition and examples of Emerging Technologies, Emerging Technologies Governance , challenges, and opportunities.

Emerging technologies are fundamentally transforming the auditing profession by enhancing the methods through which auditors collect, analyze, and interpret data. This paradigm shift moves away from traditional, manual procedures towards more automated, intelligent, and real-time audit approaches. Key examples of these transformative technologies include Artificial Intelligence (AI), Blockchain, Robotic Process Automation (RPA), the Internet of Things (IoT), and Quantum Computing.

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Effective governance of these emerging technologies is paramount to ensure their ethical deployment, manage systemic risks, and safeguard public interest. The core principles of technology governance encompass transparency, accountability, security and privacy, responsiveness, and clearly defined stakeholder responsibilities.

Auditors play a pivotal role in this evolving technological landscape by assessing risks associated with emerging technologies, ensuring compliance and governance, validating the reliability of technology-driven outputs, and providing counsel on technology adoption and digital transformation initiatives. Despite the opportunities, auditors encounter challenges such as a dearth of specialized expertise, data privacy and security concerns, system complexity, and regulatory and legal ambiguities. Nevertheless, these technologies present significant opportunities for auditors, including enhanced audit quality and accuracy, real-time auditing and continuous monitoring, increased efficiency and cost reduction, advanced data analytics, improved risk identification, and to facilitate remote digital auditing processes.

To surmount these challenges, auditors must prioritize continuous professional development and upskilling, foster collaboration with technology experts, fortify cybersecurity and data governance frameworks, strategically invest in appropriate technologies, and leverage established regulatory guidance and frameworks. Ultimately, auditors are evolving into critical figures who not only verify compliance but also guide the responsible implementation of technology.

Consequently, governance frameworks must be dynamic, adaptable, and deeply integrated with technology lifecycles, ensuring that considerations for transparency, explainability, and risk management are addressed from the outset.

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2. *SAI Estonia: " what's behind the curve ? Experimenting with Emerging Technologies in Estonia":*

Estonia shared its experiences with emerging technologies.

- ***Motivation for Digitalization:*** *The urge behind Estonia's digitalization journey is to minimize manual labor and costs, not to make work more interesting or impress international colleagues.*
- ***Strategic Goals (2020):*** *Estonia began systematically utilizing opportunities for auditing in 2020, initiated by their Auditor General.*
- ***Leveraging Existing Infrastructure:*** *Despite government processes being digitized for over 10 years and data collected in interoperable databases for over 20 years, these possibilities weren't fully utilized until 2020.*
- ***Key Initiatives:***

- *Establishing real-time connections with government databases used for auditing (state accounts and procurements).*
- *Automating some audit procedures.*
- *Applying AI to audit work where potential for reducing manual labor was identified.*

- ***AI Implementation Challenges & Learnings:***

- *Initially, Estonia started by developing its own custom AI model for a proof-of-concept project related to election campaigns. The AI aimed to detect the political notion of posts and articles (supporting candidates or disparaging opponents).*
- *Language models in 2020 were not successful in defining political notions, although they could assess positivity or negativity of text.*
- *Despite this, the data collected was useful for automating manual tasks like collecting articles with specific keywords.*

- *Estonia is now building on this experience to detect elements from government documents.*

➢ ***Successful AI Applications:***

- *Auditors have actively used AI for the past five years to transcribe interviews, reusing a solution originally created for the Estonian parliament. These highlights cross-government cooperation and sustainable code reuse.*

➢ ***Cautious Approach to Generative AI:***

- *Unlike some supreme audit institutions, Estonia is more cautious regarding generative AI tools.*
- *They are analyzing risks, especially concerning data confidentiality. Auditors are not to disclose restricted information to providers of general-purpose AI models as defined by the EU AI act.*
- *However, generative AI can be used for private tasks that do not require sensitive information.*

❖ ***SAI China made an intervention inquiring about*** *: Estonia's real-time connection with government databases, specifically:*

- *Does Estonia have real-time connection with all government databases, or only selective government agencies or entities?*
- *Is the connection to backup or production databases, and what measures are in place to avoid security risks?*

❖ ***Answer from SAI Estonia:***

Estonia explained its fortunate position in having a single government entity, the "Chelsea Centre," that operates the entire government financial system, including payroll and all transactions.

- *They have established single-point connections with the Chelsea Centre and its databases.*
- *Data exchange provides operational data from the production environment.*
- *While this setup is specific to Estonia, it's not an insurmountable obstacle for other supreme audit institutions, as ministerial-level databases should ideally provide data connections.*
- *They mentioned that solutions like additional add-ons to SAP can provide outgoing data, with Finnish colleagues utilizing such solutions.*
- *Regarding cybersecurity, Estonia highlighted the "X-Road" system, which is proven to be very reliable and secure. It requires a security server for interaction, enabling very strict rules to prevent hacking.*

❖ ***SAI Kenia made an intervention inquiring about: how to protect sensitive data and what is the updated project of audit by using AI?***

Answer from SAI Estonia:

• ***Data Confidentiality****: Estonia prioritizes the protection of sensitive data, which is enshrined in their law, especially concerning children's data.*

Automation of Auditing*: Previously, auditors manually extracted data from databases. Automation has significantly improved efficiency,* ***leading to a reduction in the number of financial auditors from nearly 100 to 30,*** *while still enabling smarter work and detection of outliers.*

Auditing AI Developments*: Estonia is involved in cooperative audit projects in Europe, focusing on how governments promote the responsible use of AI.*

Strategic Level Focus: *These projects mainly focus on strategic levels and funding for AI, rather than deep dives into applications or algorithms.*

Online Open Courses (MOOCs) on Auditing AI: *A project is underway to create three MOOCs on auditing AI in the public sector. Scripts are expected to be finalized by the end of 2025, with the first modules available in Q1 2026.*

Real-time Connections to Government Databases: *Estonia has a single government entity, the "Chelsea Centre," that operates the entire government financial system, payroll, and transactions. Estonia has single-point connections with this system and its databases, providing operational data from the production environment. This system, X-Road, is highly secure and reliable.*

Measuring Impact of Resource Allocation: *While an ongoing process, tools have been developed to help auditors detect risks and outliers, significantly reducing manual labor and time.*

Project Management: *The success of Estonia's digitalization projects is attributed to a single business owner who has the vision and oversees the development of tools and monitoring processes. Dashboards are regularly used for risk analysis by financial auditors, especially for annual account overviews.*

3. SAI China: "Role of Auditors in Emerging Technologies"

The National Audit Office of the People's Republic of China (SAI China) *initiated its presentation by outlining two primary areas of focus regarding artificial intelligence (AI) technology within public sector auditing. Firstly, the presentation intended to detail SAI China's practical applications of AI, showcasing techniques widely adopted by public sector auditors across the nation. Secondly, it aimed to provide recommendations for enhancing the utilization of AI. The initial discussion highlighted SAI China's efforts in employing large language models for localized deployments and leveraging online generative AI techniques.*

4. .SAI Brazil: "Experiences in Data-Driven Auditing"

SAI Brazil *is strategically enhancing its audit capabilities through data-driven approaches and emerging technologies. Key initiatives include the "Lab Contest" virtual machine with "Lab Corps Assist," an AI tool that translates natural language into SQL scripts, empowering auditors without specialized coding skills. To address the challenge of sharing audit findings, the "PARTS" platform centralizes "red flags" generated by audit teams, tracking historical data and facilitating communication with audited entities. Furthermore, "Copilot," an AI assistant integrated with Microsoft Word, helps auditors draft reports by identifying entities associated with red flags in real-time and assisting with document formatting. Other AI tools include "Chat TCU" for quick information retrieval from audit content, and "Alice 360" which analyzes public procurement data to detect potential overpricing. SAI Brazil's future plans include transitioning to an AI-building culture, implementing AI-based red flags for content analysis, and developing AI agents to support document creation throughout the audit process. These advancements underscore a strong commitment to leveraging AI for improved audit quality and efficiency.*

SAI Pakistan made an intervention inquiring about*: "As you discussed that chat TCU enables audit teams to upload and interact with audit related content to retrieve relevant information could you discuss how this functionality has improved audit team workflows and decision making and what safeguards are in place to ensure the accuracy and security of the information provided?"*

Answer from SAI Brazil

The answer provided was: In essence, Chat TCU allows audit teams to upload audit files and search within them for relevant information. This functionality improves workflows by providing quick access to information. For safeguards regarding accuracy and security, and as I mentioned we have a deal with the Microsoft so we handle this visual in this way.

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5. SAI Egypt:" Emerging Technologies in Auditing: Challenges and Opportunities"

This session addressed the transformative impact of emerging technologies on auditing, focusing on accountability, oversight, auditor independence, remote auditing, 5G technology, and the future of continuous auditing.

Emerging technologies are profoundly reshaping the auditing landscape by facilitating advanced capabilities such as fraud detection, secure transaction tracking, real-time inventory audits, and process automation. Nevertheless, the integration of these technologies necessitates rigorous ethical considerations, particularly concerning algorithmic bias, the privacy and security of auditee data, and the imperative for transparency in AI-driven decisions. Crucially, human oversight and judgment remain indispensable in automated auditing processes, with auditors retaining ultimate responsibility for outcomes, explanations, and the right to intervene. To navigate this evolving environment effectively, it is essential to cultivate a robust ethical auditing culture, implement adaptive innovation policies, and ensure continuous ethics training, thereby balancing technological advancement with fairness, safety, and the preservation of auditor independence and objectivity.

An open discussion

session of discussion between WGISTA member on strategies for WGISTA to better meet the needs of current and future members:

Items for discussion:

- *Potential interests in a WGISTA magazine.*
- *Strategies to connect and engage WGISTA members.*
- *Ways to expand outreach and membership.*

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Start the session with the question " what do you envision for the annual magazine? "

Answer from SAI Egypt : *WGISTA is in the process of issuing an annual magazine. Its aims are to present prominent activities and outputs, publish analytical articles and case studies on the use of science and technology in auditing, highlight members' contributions to developing innovative auditing tools, facilitate knowledge sharing, and review results of initiatives involving member states in technology auditing and digital transformations. We plan to form a dedicated editorial board from WGISTA members to oversee the preparation and publication process and ensure quality and consistency with the working group's objectives. We hope for cooperation from all members in sharing knowledge and experiences.*

Question: *"what topics would you all like to see in the magazine ?"*

Answers from members of WGISTA.

- *Any issue related to analytical or using analytical tools in the audit, especially on how to analyze data to find exceptional patterns.*
- *Success stories from member countries experiencing emerging technology tools.*
- *cases from various SAIs so that other states can learn from them.*
- *Relevant and practical information on the use of AI in emerging technologies, both for auditing public sector entities (providing assurance on their AI application) and for internal use within SAIs (being leaders in using emerging technologies).*
- *Content that caters to SAIs at different levels of development, from basic digitalization to robotics and quantum computing, to ensure inclusivity. This might involve surveys to determine where different regional organizations are in their development.*

- *Papers that address different levels of SAIs, encouraging peer-to-peer learning and support.*
- *Not just success stories, but also challenges, failures, and how strategies or processes were rethought, as this is how learning occurs.*

Question: *"what are the mechanism of publishing in the newsletter of EUROSAI ? " (Asked by a member to SAI Estonia regarding their IT working group newsletter)*

Answer: *In EUROSAI's IT Working Group, with 45 members, they have constant information exchange via email, communicating maybe twice per month. Regarding the newsletter, they send out emails asking for contributions who are willing to contribute like Germany , Egypt and others . Email is considered the best approach.*

Question: *" how you all would like to connect with other members how are you all connecting with other members and how would you like to"*

Answer: *by" email"*

Keynote speaker from : Dr: Sterling Thomas from GAO titled" AI, Foresight, and Science and Technology at GAO"

Sterling Thomas, the Chief Scientist at the U.S. Government Accountability Office (GAO)*, leverages science and technology, including foresight, to address Congressional priorities in auditing. Their work encompasses providing S&T knowledge, evaluating scientific programs, and supporting engineering sciences within the government. AI is a core focus, understood as a statistical method rooted in machine learning, where generative AI models predict word combinations based on statistical relationships. User interfaces for AI filter errors*

and incorporate "alignment" for safety and privacy. However, challenges exist in utilizing data for AI in government, including issues with data access, missing data (e.g., "unbanked individuals"), poorly maintained data with potential errors, existing biases, and inconsistent data standards across agencies. GAO also investigates evolving AI, such as "reasoning AI," which performs multi-step problem-solving, though its performance varies across different domains. Furthermore, GAO conducts foresight and horizon scanning to identify critical emerging technologies for Congress.

Questions from SAIs to GAO and Answers

Questions:

1. *Has GAO analyzed the implications of DeepSeek when implemented by government entities, and have suggestions been provided to Congress on how to tackle confidentiality issues?*
2. *When Congress seeks input on new technology, why does it come to GAO for insights?*

Answers:

1. *GAO has an ongoing study on global AI competitiveness, initiated last year, which includes conversations about DeepSeek and its impact on the U.S. AI industry. They will publicly release the framework for their competitiveness evaluation later this year and the full report next calendar year, specifically addressing DeepSeek and similar technologies.*
2. *Congress approaches GAO for unbiased insights, a role distinct from industry (which promotes its own technology) or academia (which may be biased towards specific research approaches). GAO reports on the full range of approaches to a problem, detailing benefits and challenges, providing Congress with a comprehensive and objective view for investment decisions.*

Minutes of the 5th annual meeting of The INTOSAI Working Group

on Impact of Science and Technology on Auditing (WGISTA)

U.S. Government Accountability Office (GAO) - Washington, DC

May 6-7, 2025

Announcement of the host SAI for the 6th WGISTA Annual Meeting:

H.E Vice President / Mohamed Abdelghani , announced that SAI Egypt will host the 6th annual meeting.

A Brief on the Meeting' Recommendations and Closing Remarks :

Mr. Vice president Mohammed Abdel Ghani, Vice President of the Accountability State Authority of Egypt welcomes attendees to the two-day meeting, highlighting interesting presentations and discussions on technical and academic issues related to auditing. They introduce the organization's strategic plan, emphasizing its modular approach to address important and beneficial future initiatives in auditing within supreme audit institutions.

Hence Vice president concluded with a series of key recommendations aimed at enhancing cooperation, research, and communication within the INTOSAI community. These include fostering collaboration with the INTOSAI working group on research, innovation, cybersecurity training, and education programs. A crucial suggestion is the formation of dedicated subgroups tasked with designing and conducting surveys to identify and prioritize auditing needs and challenges faced by the community, along with analyzing the resulting data.

Further recommendations involve updating the database of experts and exploring cooperation with academic institutions specializing in emerging technologies, under the oversight of relevant regulatory SAIs. To improve communication and knowledge sharing, the establishment of an editorial board for the group's magazine was proposed, along with the development of specific procedural rules for the publishing process. Finally, members are encouraged to utilize the working group's dedicated page on the INTOSAI community portal, which will serve as a central hub for all events, documents, and meeting minutes. These recommendations were subsequently approved by the members present.

The closing remarks are then given by Mrs. Orice Williams- Brown, Chief Operating Officer of GAO.

Mrs. Williams- Brown *expressed her pleasure at helping to close out what she describes as two extremely productive days of idea exchange. She notes the excellent presentations and robust discussions on challenges and opportunities facing supreme audit institutions globally. She emphasizes that working together to exchange best practices aligns with the working group's initial vision and is pleased with its progress.*

Mrs. Williams- Brown *is particularly pleased with the adoption of the working group's terms of reference and work plan for 2026-2028. She commends the exploration of ethical aspects in using and auditing emerging technologies, calling it a critical step for integrity and independence. She encourages continued engagement with outside speakers from academia and other sectors on a wide range of topics and with diverse stakeholders.*

Mrs. Williams- Brown *highlights the critical importance of continued engagement as SAIs worldwide face challenges and opportunities related to emerging science and technologies. She notes that these technologies present unique challenges but also hold transformative potential for society and government operations. She looks forward to continued progress in exploring and addressing these challenges and opportunities, thanking everyone for their participation.*

Mrs. Williams- Brown *hands the floor to H.E Vice President Mr./ Mohammed Abdel Ghani, Vice President of the Accountability State Authority of Egypt, for his concluding remarks:*

Vice president Mr. / Mohamed Abdel Ghani *expressed deep appreciation to all who contributed to the success of the 5th annual meeting of the working group on Impact of Science and Technology on Auditing. He described it as a productive*

meeting where several key milestones were achieved, which will shape the group's future. These milestones include the official adoption of the working group's terms of reference, serving as its institutional framework.

Other key milestones include the adoption of the 2026-2028 work plan, outlining the path forward in addressing advancements in science and technology. Valuable discussions were held on increasing the working group's benefits and expanding membership. Attendees enjoyed rich and insightful presentations from various SAIs. The official launch of the WGISTA website on the INTOSAI Community Portal was also announced.

***Vice President Mr. / Mohamed Abdel Ghani** extended heartfelt thanks to the US Government Accountability Office for hosting the event and for their outstanding organization, and also thanks WGISTA Secretariat for their continuous support. H.E thanks all for their presence and contributions and looks forward to the next meeting with greater ambition and preparedness to fulfill shared goals.*