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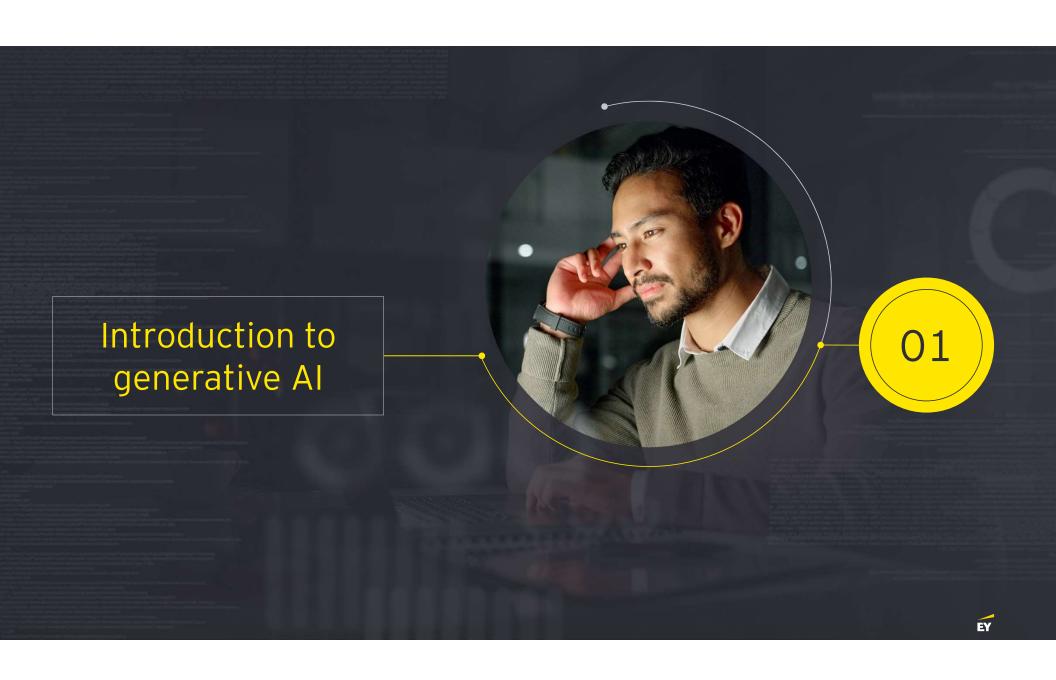
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Today's Agenda

- 1 Introduction to generative Al
- 2 Application in finance and accounting
- 3 Al governance, risks and ethics
- How EY is using Al





What is Generative Artificial Intelligence - also called Generative AI or Gen AI?

Artificial Intelligence

Al, or artificial intelligence, is a field of computer science that focuses on creating intelligent machines capable of tasks requiring human intelligence.

Machine Learning

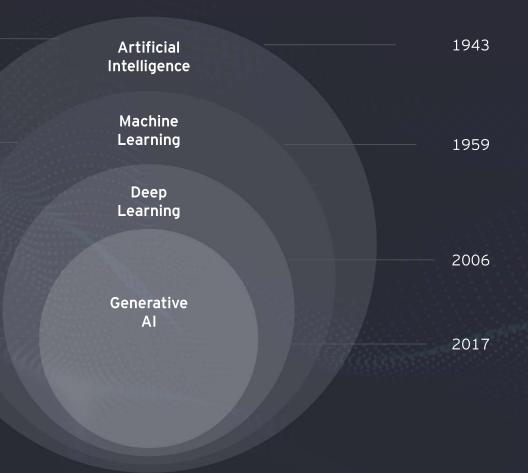
Machine learning is a subfield of artificial intelligence, which is broadly defined as the capability of a machine to imitate intelligent human behaviour.

Deep Learning

Deep learning is a subset of machine learning, which is essentially a neural network with three or more layers.

Generative AI

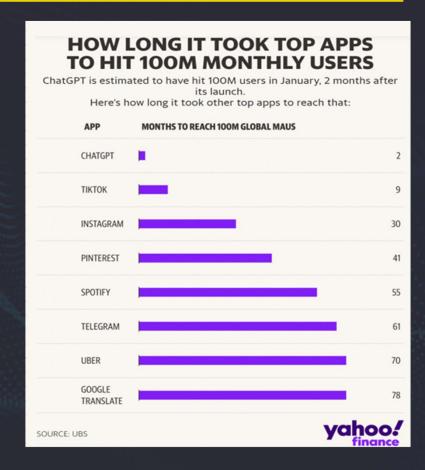
Generative AI is a type of artificial intelligence that can create new content such as images, text, audio, or video based on the data it has been trained on, using techniques like large language models, transformer neural networks, and generative adversarial networks





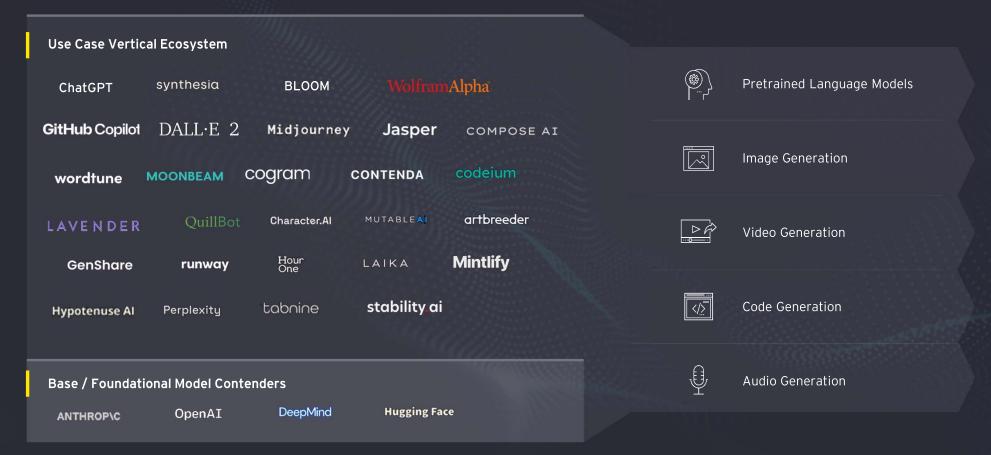
Unprecedented Adoption of LLMs by Consumers







ChatGPT is just one type of Generative AI capability in a sea of growth





Generative Al augments traditional ML, does not replace it

	Classical Al	Generative Al			
From single-use to broad application	Fit-for-purpose model - single-use models to address specific topics (customer churn, fraud, risk, etc.)	 Multi-purpose LLM - one model can address variety of tasks and topics Multi-modal 			
From model creation to model adaptation	Starts with creating new model - using supervised training to deliver pre-defined outcomes	 Starts with existing foundational model - can be adapted for specific purpose cost-effective speed to insight 			
From complex interface to natural human language	Computer language - requires technical expertise to build and interrogate the model	Natural language - understands user commands in natural human language conversational			
From pattern recognition to pattern creation	Discriminative - ideal for classifying, clustering, making predictions and recommendations	 Generative - can lead to truly innovative and unexpected solutions across real-world applications creative first draft 			
Example:	Analyze consumer behavior data to identify best content for driving customer retention	Use that same data to create entirely new personalized content to drive new customer acquisition and sales			
Key Enablers:	Machine learning, neural networks, deep learning	Massive computing power (GPUs), advanced deep learning (transformer architecture with attention mechanism), natural language interface			



Why is GenAl worth a try for many finance and tax leaders?

Potential benefits of GenAl for Finance



Challenges of GenAl —



Increased efficiency 50%

Less time dedication to planning & forecasting processes (Microsoft)

15 - 50%

time savings in finance processes execution (Microsoft)

Enhanced performance 25%

Less time reaching AI benefits than peers, when Gen AI is used (Gartner)

Improved cashflow forecast accuracy with advanced AI (EY client experience)

Improved experiences 72%

of global consumers said GenAl would improve CX (Adobe)

90th

percentile scored by ChatGPT on the Bar of ease of use

Ethical & confidence concerns

Bias

Reliance on LLM's will decrease truth seeking efforts

Hallucination

Generation of inaccurate information caused by bias in training and algorithms

IP Concerns \$1.8 T lawsuit filed by Getty Images against Ál image generator

Job **Impacts**

66% CEOs say jobs impacted by AI will be counter-balanced by new roles (CEO Survey, 2023 | IDC | McKinsey)

is the average cost of training per employee (Indeed)

Regulatory concerns

Italy is first Western country to ban ChatGPT

76 page "Al Bill of Rights" blueprint unveiled by White House





Finance use cases deliver value through efficiency or effectiveness

		Efficiency			Effectiveness	
FP&A	Commentary & Report Generation	Variance & Root Cause Analysis	Self Guided Report Generation	Predictive Analytics & Scenario Analysis	Optimization and Prescriptive Actions	Driver Analytics Resource Allocation
Controllership	E2E Process Automation and Management	Fast Close Enablers (eg auto recs)	Restructuring Management	Accounting Knowledge Management	Predictive Financial Reports	Al-Powered Controls
Treasury	Financial Capital Markets Instrument Knowledge Knowledge Management		CF Forecasting with Prescriptive Triggers	Investment and Working Capital Optimization	FX Monitoring and Auto Hedging	
Tax	Transaction Coding and Error Prevention	Anomaly Detection	Regulatory Knowledge Management	Tax Forecasting	Tax Strategy Optimization and Scenario Modeling	
Investor Relations	Investor and Analyst Comms Drafts Proxy Material Generation		Earnings Q&A Sentiment Prediction Analysis			
Internal Audit & Risk	Regulatory Knowledge Bot	Audit Evidence Gathering		Al-Powered Controls Risk Profiling & Analysis Identification, Design & Scoring Monitoring		
Covs to Scale:	Data quality used by the AI and GenAI models Finance professionals' readiness to understan					

Keys to Scale

Data quality used by the AI and GenAI models across the different layers of automation



the possibilities of the technology and to lead the Aljourney



Generative AI hotspots in the finance function

Accounting policy

- Technical memo preparation, including accounting treatment analysis
- Automating the collection of data for leases or revenue transactions
- Accounting policy Q&A tools/chatbots

Financial reporting

- Pre-populating complex annual reporting
- Checklist completion with necessary references
- Data capture and cleansing to support generation of regulatory reports

Financial operations and close process

- Classification of information elements from sales invoices, accounts payable (AP) and other documents
- Contract review and classification (operating, derivative, lease, etc.)
- Drafting journal entry mechanics
- Automating checks and reconciliations: intercompany balances, transactions to bank balances

Page 12 | Generative AI for finance and accounting



Audit and risk management

- Drafting workpaper and audit documentation, including references to accounting policy and framework
- Outlier analysis and fraud detection
- Creating exception file and email report for finance review and approval

Tax

- Indirect tax: Sales & use tax, product master classification, VAT, Global trade / cross border
- R&D write-up/ documentation tool
- Tax compliance for ASC740
- Transfer pricing guide and write-up assistant
- Global immigration and personnel tax chatbot
- AP Classifier

Financial systems and technology

- Dashboard and workflow creation
- Chart of accounts structure suggestions
- Code generation, debugging, standardization and understanding for variance analyses and financial models

Financial planning and analysis

- Creating variance reports to prepopulation and to actuals
- Pre-population of forecasts using historical and market data
- Analyze and model different scenarios
- Calculation and processing of rebates



Solution examples



Narrative Generation Al

Benefits over traditional methods

Al can draft narratives and footnote disclosures for financial reporting, disclosures, and regulatory filings based on pre-defined template reports and financial data.

- Deliver superior insights by analyzing extensive volumes of data and generating intelligent recommendations.
- Provides quick and accurate responses, streamlines workflows and enable collaboration.



Automated Checklist Completion

Benefits over traditional methods

Al can process draft financial statements and suggest answers to the disclosure checklist questions.

- Outperforms in terms of speed and accuracy
- Provides evidence to support the answers to the questions
- Generates audit trail that can be reviewed easily



Finance and Accounting
Virtual Assistant

Benefits over traditional methods

Generative AI technology can be trained in processing company financial documents and policies.

- Offers personalized responses
- Responds in an easy-to-understand manner
- Provides source and context to responses
- Draws upon knowledge from external and internal sources

Use Case 1: Narrative Generation Al

Solution statement

The Narrative Generation tool uses Generative AI to draft narratives and footnote disclosures for 10K and 10Q reporting, disclosures, and regulatory filings based on pre-defined template reports and financial data provided by the user.

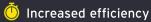
Data and historical report integration

- Connects to the user's databases to easily import the financial data required to populate the narratives.
- Historical reports are used as example templates to teach the Al model how to generate accurate and compelling financial narratives.

Narrative generation

- The user selects a report and dataset based on the templates provided. Modifications can be made to improve the quality of results:
 - The data can be modified as needed by uploading supplementary data files and using custom SQL queries.
 - 2. Improved responses can be encouraged by providing the model with feedback or using prompt engineering techniques.
- Based on the example template and financial information, the tool generates a financial narrative. The narrative is checked for accuracy and corrected by the user within the tool's user interface.
- After the narrative is accepted, the tool generates a fully formatted PDF report containing the relevant narrative and data.

Value achieved



Provide quick and accurate responses, streamline workflows and enable collaboration.

Enhanced Insights

Deliver superior insights by analyzing extensive volumes of data and generating valuable and intelligent recommendations.

Reduce risk of errors

Diligently emphasize attention to detail and expertly validate date to maintain ethical standards

Reduced Cost

Achieve cost savings through the automation of repetitive tasks and let team members to focus on more strategic responsibilities.





Use Case 2: Automated Checklist Completion

Solution statement

Automated Checklist Completion (ACC) tool provides a platform that uses generative AI to "read" the draft financial statements and suggests answers to the disclosure checklist questions. To use this tool, simply select the checklist, complete the question scoping and upload the draft financial statements.

Financial statements processing

- Read the financial information and perform various operations based on the financial statements' formats. This can include actions such as opening, editing, saving, copying, moving or deleting the statements.
- Processing the financial statements can also involve tasks such as compression, encryption or conversion to a different format. These operations can be performed automatically by the platforms designed for specific tasks.

Financial checklist completion

- Based on the information retrieved, the tools provide responses to the financial statement checklist questions, such as:
 - 1. Are the financial statements identified clearly (using an unambiguous title) and distinguished from other information in the same published document?
 - 2. Does the entity present a complete set of financial statements, which comprise a statement of profit or loss and other comprehensive income for the period?

What are the benefits? State-of-the-art generative AI is used to recommend the pages Allows rapid iterations through auestions Outperforms in terms of speed and accuracy Provides evidence to support the Generates audit answers to the trail that can be questions reviewed easily



Use Case 3: Finance and Accounting Virtual Assistant

Solution statement

Leveraging generative AI technology and our Policy Sphere, our advanced virtual assistant efficiently addresses inquiries about company policies. It offers personalized responses, natural language understanding and streamlined access to vital policy information for a superior user experience.

Hi, can you list the different costing methods used in inventory management?

Sure. There are four main costing methods used in inventory management: specific identification; first-in, first-out (FIFO); average cost; and last-in, first-out (LIFO).

Click to see the source of this response >

Can you elaborate on the LIFO method? Summarize this in two sentences.

The LIFO method assumes that the last inventory units purchased or produced are sold first, resulting in lower income during inflationary periods compared to other costing methods. Two basic methods of determining LIFO cost are specific identification and dollar value.

Click to see the source of this response >

METADATA Policy: Inventory

ABC Company

XYZ Author/Policy Owner

Function Finance and Accounting **Topics** Assets

Created MM/DD/YYYY Last Updated MM/DD/YYY

Last-in, first-out (LIFO)

The LIFO method assumes that inventory units that are purchased and/or applied to the production process last are sold first. Because the LIFO method measures cost of sales based on the costs of the last enventory units acquired or produced, in inflationary periods, the LIFO method results in less income currently than would be the case if the FIFO or average cost methods were used. US federal income tax laws and regulations describe the application of the LIFO method and require, as a condition for the right to use LIFO for tax purposes, that the method also be used for reporting income in the primary financial statements. However, it is acceptable that the method of applying LIFO differ for accounting and tax purposes.

here are two basic methods of determining LIFO cost, specific identification and dollar value.

Specific identification LIFO method

The simplest LIFO costing method is the specific identification method, which associates inventory costs with a specific item of inventory (e.g., a specific grade of tobacco). If the specific-identification LIFO method is used, it must be applied separately to each different product in inventory. That is, separate LIFO layers are maintained for each unique product.

Refer to Illustrative example B.

· Dollar-value method

The dollar-value method overcomes most of the disadvantages of the specific-identification LIFO method. Its distinguishing feature is that similar items of inventory are aggregated to form inventory pools." Increases and decreases in a pool are identified and measured in terms of the total dollar value of the items in the pool and not the quantity of physical items. Except insofar as they relate to establishing the pools, changes in quantities and in product mix within a pool are ignored.

Value achieved



Increased efficiency

Al assistants rapidly analyze policy data, delivering real-time and precise information to users.

Scalability

Al assistants handle high volumes of inquiries simultaneously, ensuring timely support for all users, even during peak periods.

Improved accessibility

Al assistants provide 24/7, instant policy-related answers from EY Policy Sphere without human intervention.

Consistency

Al assistants provide accurate and up-to-date policy guidance across multiple channels.



Key considerations for generative AI adoption



- ▶ What short-term and long-term governance guidance does your organization need to help ensure that all initiatives related to generative Al deployment are aligned and moving forward at a consistent pace?
- ▶ How will the nature of work change because of generative AI?
 - For instance, organizations will need to explore what roles might need to be automated, transformed or even created.
- ▶ Is the current organization structure equipped to support efficient integration of generative AI?
- ▶ What should be the mapping within the organization for generative Al roles/positions (e.g., LLM experts, data scientists)?

Technological readiness

- ▶ Is the organization already proficient in the use of relevant/required technical tools and technologies?
 - ▶ If not, does your budget allow you to invest in prerequisites of generative AI deployment, such as technical capabilities, tools and resources?
- Do you have the data you need, and is it stored in a way that can be easily accessed by AI models?
- ▶ How flexible is the current technology ecosystem? Will it be able to integrate a new technology seamlessly?
- ▶ What guardrails do you need to install for the safe, secure and legal use of this technology?
- Talent and skill set
- ▶ Does your staff have the experience and training required to develop and deploy generative AI models?
- ▶ What level of training would be required to upskill the current staff for generative AI deployment?
- ▶ Is the organization willing and financially well positioned to invest in required upskilling? Is there an existing training program or plans to install one?
- ▶ What new competencies will managers need to lead an Al-augmented workforce?



- ▶ What training will help ensure that your workforce uses generative Al appropriately and ethically?
- ▶ How can you adapt professional identity to encourage Al adoption?
- ▶ How can you encourage a culture in which humans and Al collaborate as colleagues?
- ▶ How can management communication create positive momentum?





What does an example AI implementation plan include?

Integrating AI into finance requires a thoughtful and controlled approach to ensure a sustainable and successful adoption.

Key Questions:

- What are the low-risk finance use cases to start with for early adoption?
- How can relevant risks and limitations associated with Al be mitigated?
- What governance is needed from the organization to deploy sustainable AI?
- How will the team ensure preparedness across supporting workstreams?

Profile of Good Initial Use Cases

- Low-risk finance use cases to start where AI is the better suited technology
- Clear business objectives with favourable ROI
- High-quality data with sufficient history and insight available to assess model

Governance and Oversight

- Establish governance board and policy framework with quality thresholds
- Develop mitigation strategies to remediate concerns around data privacy, model bias and copyright/IP
- Early engagement with key stakeholders (e.g., external auditors, compliance)

Mobilize Supporting Workstreams

- Assess IT's capacity and commitment to support AI and its infrastructure
- Develop training programs for users, aligned with continuous education as Al technology evolves
- Execute controlled Al implementation and effective post go-live monitoring



Why should AI adoption start with governance?

Establishing a governance framework **while AI is in early stages of adoption maximizes upside** value and **minimizes downside** risk

Organizations that lead with governance...

- Understand and mitigate risks of AI before they materialize
- Proactively identify high-value areas for Al deployment
- Scale learnings and best practices discovered in early pilots
- Accelerate ROI by protecting revenue in addition to generating it
- Adopt AI at scale and maximize impact across functions and BUs

Organizations that don't lead with governance...

- Adopt AI in siloes, which limits scale, ROI and visibility
- Create prioritization chaos, which results in fragmented investment
- Reactively address risks, damaging both reputation and finances
- Repeat mistakes across BUs throughout the Al adoption lifecycle



The cornerstones of governance apply to AI but require unique considerations

Understanding who is responsible to implement the areas below across the business is critical

Policy

Alignment to process, risk and control framework, user access management and disaster recovery/resilience plan

Process

Process control logs, repository of business rules and algorithms, exception scenarios and decision-making, and documenting processes

Governance

Strategy, standards, program risk, vendor risk, monitoring and oversight

Controls

Audit trails, early warning signs, controls to monitor performance, prevent sensitive data and assurance on effectiveness of controls

Technology

Cyber threat detection, incident response, threat intelligence, data privacy, code flaws, authentication and post-deployment review

Change management

Stakeholder engagement across teams (IT, Risk, Business), instituting an effective communication protocol, and driving focus toward value creating activities



Traditional risk and control categories apply to AI technology, but they each bring their own unique risk considerations



Responsible AI framework

Accountability: there is unambiguous ownership over AI systems and their impacts across the AI development lifecycle.

Sustainability: the design and deployment of AI systems are compatible with the goals of sustaining physical safety, social well-being, and planetary health.

Transparency: appropriate levels of openness regarding the purpose, design, and impact of AI systems is provided so that end users and system designers can understand, evaluate, and correctly employ AI outputs.

Explainability: appropriate levels of explanation are enabled so that the decision criteria of Al systems can be reasonably understood, challenged, and/or validated by human operators.

Fairness: Al systems are designed with consideration for the need of all impacted stakeholders and to promote inclusiveness and positive societal impact.

Reliability: outcomes of AI systems are aligned with stakeholder expectations and perform at a desired level of precision and consistency, whilst being secured from unauthorized access, corruption, and/or adversarial attack.

Privacy: Al systems are design with consideration to data rights regarding how personal information is collected, stored, and used.



New Al technology brings new risks

Al introduces new conditions beyond those traditionally considered in the IT function:

Potential lack of clarity over rationale/criteria for a decision or output can make monitoring difficult

Changes occurring via selflearning by the AI system may not follow a traditional manage change process

Al's capabilities may outpace today's monitoring and validation tools

Incomplete or inaccurate inputs (i.e. training data) can produce biased or incorrect predictions



What are example AI risk categories and controls to consider?

Risks

01 Design risk

02 Data risk

03 Algorithmic risks

04 Performance risk

Risk descriptions

Is the solution designed contemplating the needs of all impacted stakeholders?

Is the right data available? Is the data unbiased and representative?

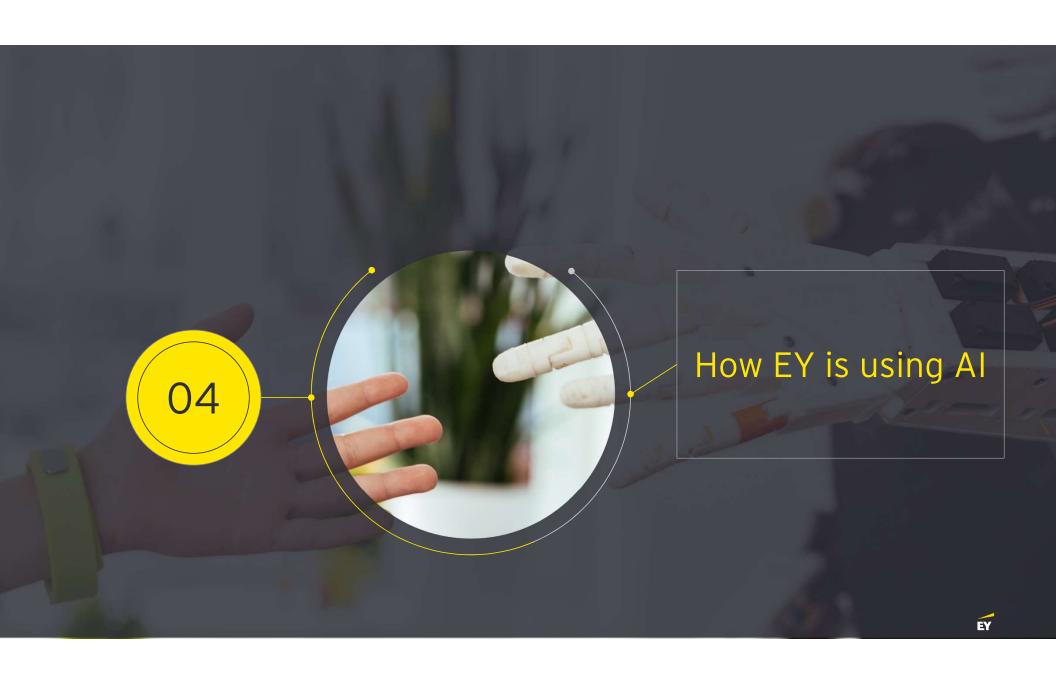
Is the AI system explainable?

Does the AI produce accurate and reliable outcomes?

Processes and controls

- Design documentation (comprehensive, comprehensible)
- Al regulatory/legal compliance, data protection and privacy regulations
- Established team of qualified personnel to provide oversight, monitoring, maintenance
- Documentation and review of input data requirements
- Validation procedures to identify and remediate deviations from established requirements
- Process designed to assess quality, security and integrity of data used
- Audit trail to explain outcomes
- Review of model appropriateness for the intended purpose
- Quality and security validation of third-party Al systems
- Validation controls over data inputs and Al outputs
- Proper IT controls over access and change management





EY's technology investments in Al

Now

Investing in next-generation audit technology

Completed the first 12 months of our four-year **US\$1b** investment with 20 new Assurance technologies released, including Al capabilities, which will be used on ABC Company

Next

Accelerating additional investments in Al

Additional investment of more than **US\$1.4b** in new AI capabilities, building upon the 2023 launch of our proprietary large language model, EY.ai EYQ

Beyond

Continuing to invest

Our roadmap includes new Al technologies, including generative Al, that will **continue to transform** our audit service delivery model



Learn more about EY's US\$1.4b investment in Al

Powering the EY Digital Audit with Al

EY is investing more than US\$1billion in next-generation Assurance technology to power data-driven and Al-enabled Assurance services, and to drive ongoing quality and value. This four-year investment program is facilitating integration and transformation of leading-edge capabilities into one seamless platform. The following are some selected examples of in-process areas of development that will shape the future of our digital audit technology.

Audit themes

Recommendations

recommendations

Pattern and anomaly detection

Information gathering and recognition

Conversation and human interaction

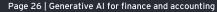
Selected examples

EY Canvas AI: supports risk assessment for EY teams by leveraging advanced, AI-enabled algorithms directly within our core EY Canvas audit platform

General Ledger Anomaly Detector: detects anomalies by analyzing journal entries, identifying outliers for further investigation

Document intelligence: reads underlying business documentation and vouches back to journal entries and financial statements

EY Atlas and generative AI: enable accounting and auditing content search and summarization





How does EY Assurance think about auditing a company's use of AI?

Overview

With no current auditing standards specific to the auditor's responsibilities for financial reporting processes that are supported by AI, EY has developed an internal AI Assurance Framework.

The framework supplements the requirements/guidance in EY's GAM and highlights:

The importance of understanding how the use of Al applications and other emerging technologies fits within an entity's overall business strategies and the business model implemented to achieve those strategies

The types of management's controls expected to address the risks of material misstatement as it relates to Al

Considerations related to identifying the risks of material misstatement arising from management's use of Al applications within the financial reporting processes and the nature, timing and extent of our responses to identified risks of material misstatement that arise from the entity's use of Al in their financial reporting processes

3



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